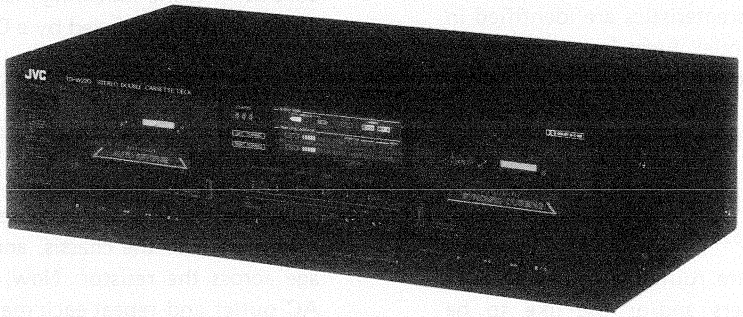
JVC

SERVICE MANUAL

STEREO DOUBLE CASSETTE DECK

MODEL TD-W220 A/B/C/E/G/J/U



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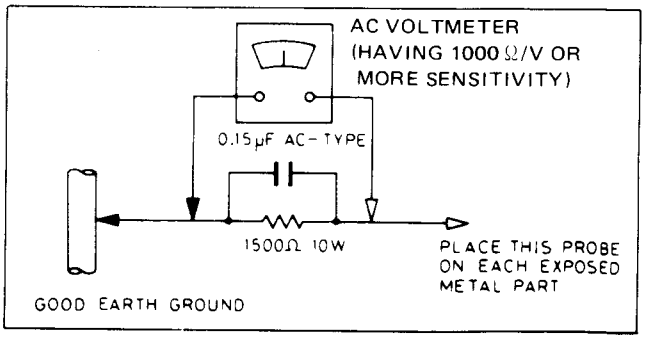
1 Safety Precautions

1. The design of this product contains special hardware. Many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by then necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by (⚠) on the schematics and parts list in Service manual. The use of a substitute replacement which does not have the same safety characterisitics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature part, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.
5. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc,). Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method.
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.).
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.).
     This corresponds to 0.5 mA AC (r.m.s.).



2 Features

1. **Double cassette mechanism for recording/playback and playback**
   - Recording/playback mechanism with flip reverse head system in deck B.
2. **Two logic-control deck mechanisms**
   - High-speed dubbing functions reduces tape editing time by half.
3. **Dolby* B & C noise reduction system**
4. **2-color 6-LED peak level indicator**
5. **Synchro start dubbing**
6. **Metal tape compatibility**
7. **Auto tape select mechanism (deck A)**
8. **MIC jacks provided**

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

* "Dolby" and the double-D symbol ⊡⊡ are trademarks of Dolby Laboratories Licensing Corporation.

3 Specifications

Type	: Stereo double cassette deck
Track system	: 4-track, 2-channel
Tape speed	: 1-7/8 inch/sec (4.8 cm/sec)
Frequency response	
(–20 dB recording)	: Metal tape; 30–16,000 Hz (DIN 45500) 40–15,000 Hz (± 3 dB) Chrome tape; 30–16,000 Hz (DIN 45500) 40–15,000 Hz (± 3 dB) Normal tape; 30–15,000 Hz (DIN 45500) 40–14,000 Hz (± 3 dB)
(0 dB recording)	: Metal tape; 40–11,000 Hz (±3 dB) Chrome tape; 40–8,000 Hz (± 3 dB) Normal tape; 40–8,000 Hz (± 3 dB)
S/N ratio	: 58 dB (S = 1 kHz, K3 = 3%, N = A-weighted, Metal tape) The S/N is improved by about 15 dB at 500 Hz, by max. 20 dB at 1 kHz – 10 kHz with DOLBY C NR on and improved by 5 dB at 1 kHz and 10 dB at above 5 kHz with DOLBY B NR on.
Improvement of MOL	: 4 dB at 10 kHz with DOLBY C NR on
Wow and flutter	: 0.08% (WRMS) 0.20% (DIN 45500)
Crosstalk	: 60 dB (1 kHz)
Harmonic distortion	: K3; 0.5%, THD; 1.0% (metal tape, 1 kHz, 0 dB)
Channel separation	: 40 dB (1 kHz)
Heads	: Deck A; METAPERM head for playback Deck B ; METAPERM head for recording/playback, 2-gap ferrite head for erasure
Motors	: Electronic governed DC motor for capstan/reel x 1 (For both decks A and B)
Fast forward/ rewind time	: Approx. 100 sec with C-60 cassette
Input terminals	
LINE IN x 2	: Min. input level; 80 mV Input impedance; 50 kΩ
MIC x 2	: Max. sensitivity; 0.4 mV (–68 dBV) Matching impedance; 600 Ω – 10 kΩ
Output terminals	
LINE OUT x 2	: Output level; 300 mV Output impedance; 5 kΩ
PHONES x 1 (B/E/G version only)	: Output level; 0.3 mW/8 Ω Matching impedance; 8 – 1 kΩ
DIN (REC/PB) ×1 (G version only)	: Min. input level; 0.1 mV/kΩ Input impedance; 10 kΩ Output level; 0.3 V Output impedance; 5 kΩ
Power requirement	
TD-W220A/B	: AC 240 V, 50/60 Hz
TD-W220C/J	: AC 120 V, 60 Hz
TD-W220U	: AC 230/127/110 V, 50/60 Hz
TD-W220E/G	: AC 220 V, 50/60 Hz
Power consumption	: with power on; 16 W with power switch standby; 1.6 W
Dimensions	: 435 mm (17-3/16") W 119 mm (4-11/16") H 220 mm (8-11/16") D
Weight	: 3.8 kg (8.4 lbs)
Accessories	: Pin plug cord . . . . . x 2

Design and specifications are subject to change without notice.

4 Names of Controls and Their Functions

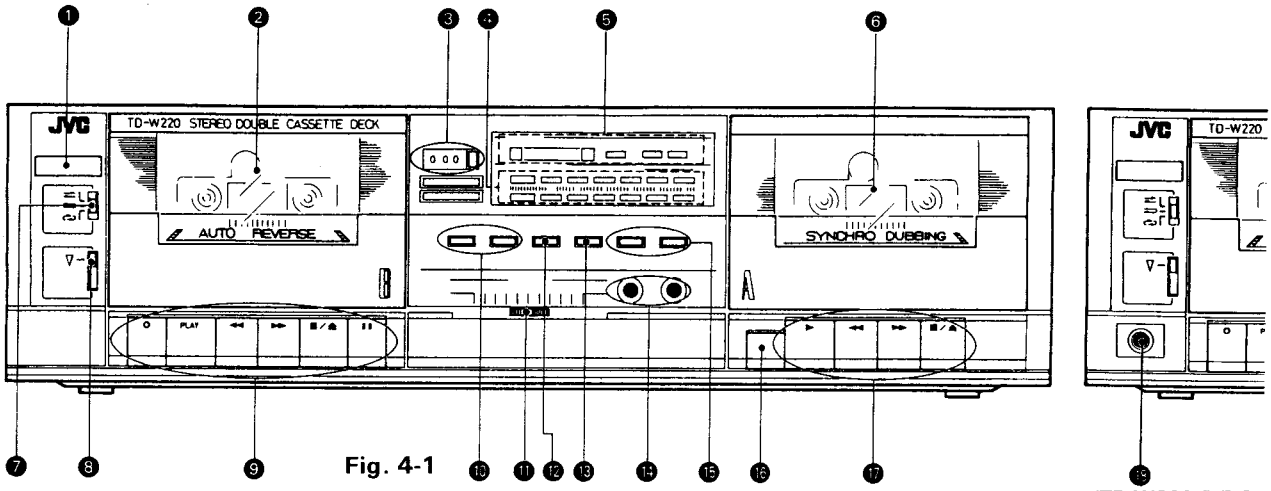


Fig. 4-1

(TD-W220 B/E/G)

❶ **POWER switch**

❷ **Cassette holder (deck B)**

❸ **TAPE COUNTER and RESET button (deck B)**

❹ **PEAK LEVEL INDICATOR**

These indicate the recording level during recording and output level during playback. The LED indication varies with the signal strength during recording and playback.

❺ **B DECK MODE indicators**

- **REV**
  Lights when the tape is running in the reverse direction.
- **FWD**
  Lights when the tape is running in the forward direction.
- **REC**
  This lights when deck B is in the recording and record-pause mode.
- **HIGH**
  This lights when in the high-speed dubbing.
- **DUB**
  This lights to indicate that the unit is in the dubbing mode.

❻ **Cassette holder (deck A)**

❼ **REVERSE MODE switch (deck B)**

Select single or full record/playback mode, or continuous play mode.

⇄ : For a single-side recording or playback.
⇉ : To record or play sides A and B.
↻ : To play sides A and B continuously.

❽ **DIRECTION switch (deck B)**

Press to change the direction of tape travel.

❾ **Cassette operation buttons (deck B)**

O (record):
Press to record the tape.

PLAY:
Press to play the tape.

◄◄ (rewind):
Press to fast wind the tape from right to left.

►► (fast forward):
Press to fast wind the tape from left to right.

■/⏏ (stop/eject):
Press to stop the tape. Pressing this button after the tape stops opens the cassette holder. (The tape automatically stops when it reaches the end.)

II (pause):
Press to temporarily stop the tape in the record or playback mode. Press it again to release the pause mode and restart the tape.

❿ **TAPE SELECT switches (deck B)**

When recording or playing back on deck B, select the correct setting according to the type of tape used.

⓫ **INPUT LEVEL control**

Adjust the recording level with this control.

⓬ **SPEED switch**

Used to switch the tape speed when dubbing.
(▁) HIGH: For high-speed dubbing.
(▔) NORM: For normal-speed dubbing.
Moreover, this is required when recording from the LINE IN input. Set to this position except during high-speed dubbing.

⓭ **DUBBING switch**

Set to ON (▁) when dubbing from deck **A** to deck **B**.

⓮ **MIC jacks (LEFT, RIGHT)**

Connect microphones (with an impedance of 600 Ω to 10 kΩ) to these jacks.
With microphones connected to these jacks, the input to the LINE IN (REC) terminals is cut off automatically.

⓯ **NR SYSTEM switches**

The left switch switches on and off the noise reduction circuits and the right switch selects which noise reduction system (Dolby B NR or Dolby C NR) is to be used.

⓰ **SYNCHRO PLAY button**

Press this button when performing synchro dubbing. Do not press this button other than for this purpose.

● **Cassette operation buttons (deck A)**

► **(play):**
Press to play the tape.

◄◄ **(rewind):**
Press to rewind the tape.

►► **(fast forward):**
Press to fast forward the tape

■/⏏ **(stop/eject):**
Press to stop the tape. Pressing this button after the tape stops opens the cassette holder. (The tape automatically stops when it reaches the end.)

● **PHONES jack (B/E/G version only)**
Connect headphones (with an impedance of 8Ω — 1kΩ).

5 Location of Main Parts

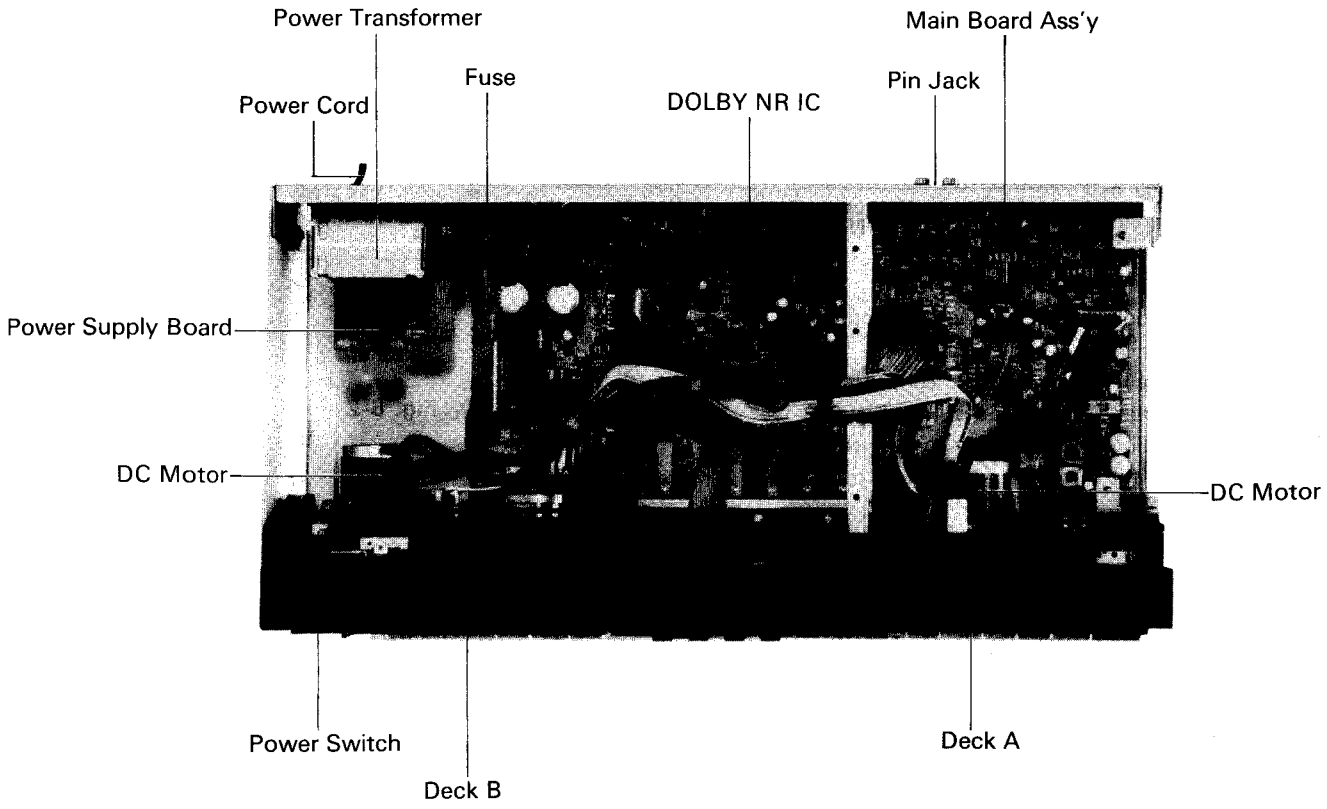


Fig. 5-1

6 Removal of Main Parts

Enclosure Section

- **Removal of Top cover**
  1) Remove six screws retaining the both sides of the top cover.
  2) Remove two screws retaining the back side of the top cover.
- **Removal of Bottom cover**
  1) Remove three screws retaining the front side of the bottom cover.
  2) Remove three screws retaining the rear side of the bottom cover.
- **Removal of Rear panel**
  1) Remove four screws ①, ② and ③.
  2) Remove four screws ④ retaining the power transformer.
  3) Remove two rivets retaining the DIN jack to the rear panel. (for G version)
- **Removal of Front panel ass'y**
  1) Remove three screws ⑤ retaining the main board to the chassis and bracket and remove two screws ②.
  2) If necessary, remove dressed wires and disconnect connectors temporarily.
  3) Pull out the main board ass'y.
- **Removal of Power switch ass'y**
  Remove two screws ⑥ retaining the power switch ass'y to the front panel ass'y.
- **Removal of Mechanism ass'y**
  (Deck B)
  1) Remove the counter belt.
     If necessary, remove one screw ⑦ retaining the damper holder ass'y.
  2) Remove four screws ⑧ retaining the Deck B.
  3) Open the cassette door by depressing the Stop/Eject button.
  4) Remove the cassette holder from the mechanism ass'y disengaging its fulcrums on both sides. (See Fig. 6-3.)

  Note: When reassembling the cassette holder, set the holder spring in the left arm of the holder prior to reassembly.

  (Deck A)
  If necessary, remove one screw ⑪ retaining the damper holder.
  1) Remove four screws ⑫ retaining the Deck A.
  2) Open the cassette door by depressing the Stop/Eject button.
  3) Remove the cassette holder from the mechanism ass'y disengaging its fulcrums on both sides.

  Note: When reassembling the cassette holder, set the holder spring in the left arm of the holder prior to reassembly.
- **Removal of Tape counter**
  Remove one screw ⑨.
- **LED Indicator**
  Remove two pawls ⑩ retaining the indicator board.

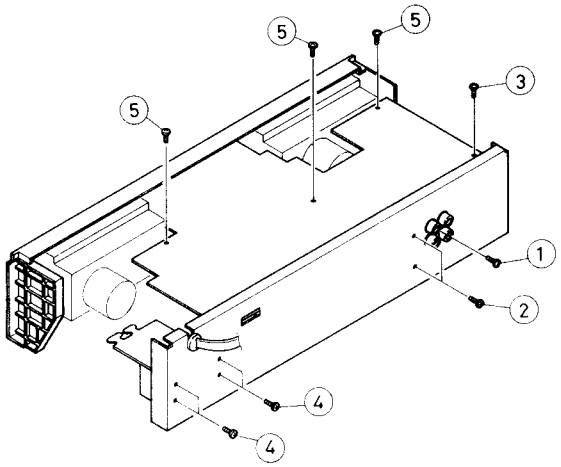


Fig. 6-1

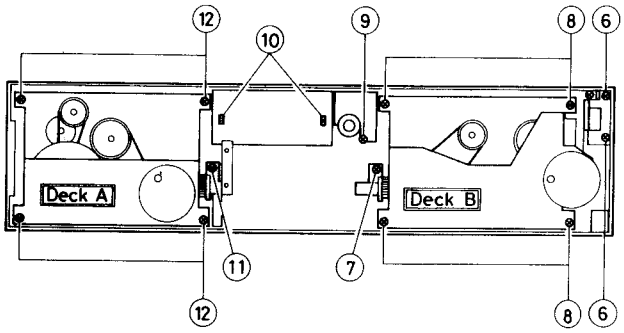


Fig. 6-2

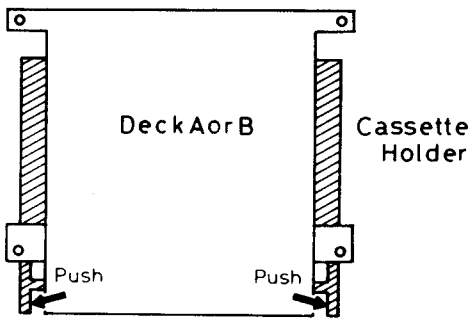


Fig. 6-3

Mechanical parts

- **Rec./PB head (Deck B)**
  1) Remove 2 screws (31) for the button assembly.
  2) Remove a screw (32).
  3) Loosen a screw (33) for adjustment.
- **Erase head**
  1) Remove a screw (34).
  2) Remove a screw (35) for adjustment.
- **Pinch roller arm assembly**
  1) Remove a stopper (36) holding its assembly, and pull it off from the shaft.
- **Supply reel disc assembly**
  1) Pull out the E ring (37) and remove its disc from the shaft.
- **Take-up reel disc**
  1) Pull out the E ring (38) and remove it from the shaft.
- **Motor**
  1) Remove three screws (39), (40) and (41) fastening the FM bracket. (When removing the FM bracket (42), remove with the main belt (43) and the RF belt (44).)
  2) Remove three screws (45) fastening the motor.
  3) Pull out the motor pulley from the motor shaft.

  Note: Be careful not to stain the main belt and RF belt. (When assembling the motor pulley, adjust the pulley position as next figure.)

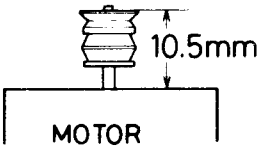
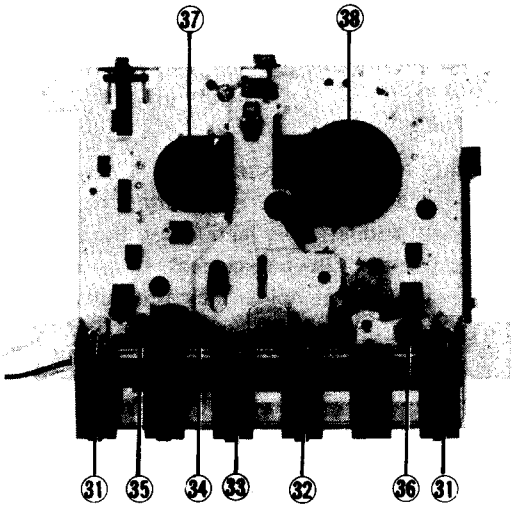


Fig. 6-5

- **Flywheel assembly**
  Pull out the flywheel from the capstan metal.



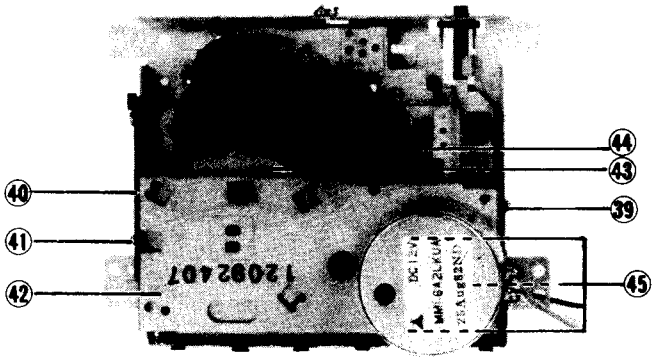


Fig. 6-4

Removal of Mechanism Assembly for Deck B

- **Head assembly**
  1. Remove the two screws ① from the head gap side. (For loosening the screws, heat the screw lock bond a little to make the work easy.)
  2. For replacing the head, pull it outwards and disconnect wires temporarily.
- **Button/button frame assembly**
  Remove the two screws ② securing the button ass'y to the chassis.

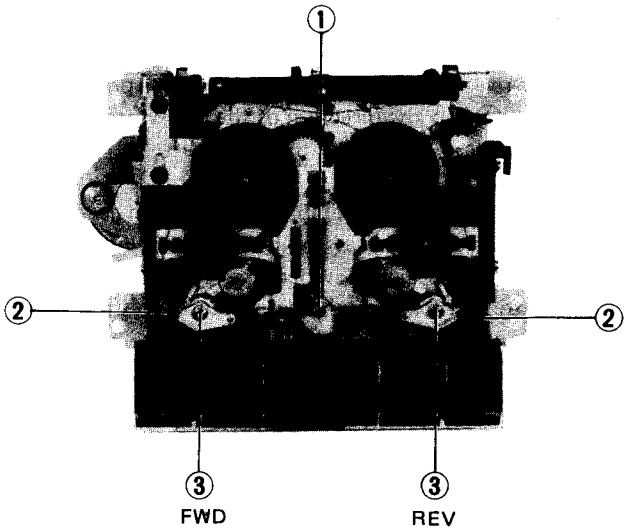


Fig. 6-6

■ **Pinch roller assembly**

Remove the screws ③ securing the pinch roller arm.
(For engaging the return spring, see the figure.)

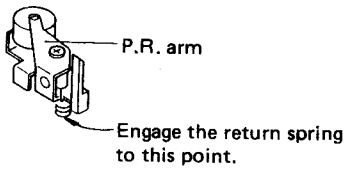


Fig. 6-7

■ **FM bracket and Motor assembly**

1. Remove the three screws ④ securing the FM bracket at the right and left sides, and loosen the screw ⑤ to make it free from the engagement.
2. Remove the cassette holder lock arm spring.
3. The capstan belt comes off by removing the FM bracket.
   Then, the motor can be replaced.

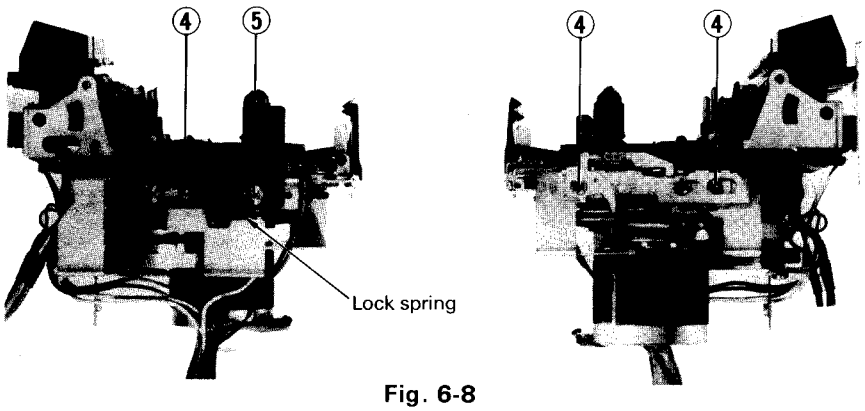


Fig. 6-8

■ **Main gear/cam gear**

1. Remove the FM bracket and pull the flywheel outward. (At this time, the washer for oil cut comes off together in the direction of the reel disc side.)
2. Remove two screws ⑥ securing the slide lever and the head junction board.
3. Remove the washer ⑧ securing the pulley.
4. Remove the slit washer ⑦ securing the direction lever ass'y first, and then remove the lever ass'y taking care of the spring not to be tired by stretching.
5. Remove the E-washer ⑨ securing the main gear.
6. Remove the E-washer securing the cam gear.

- When re-assembling, engage the cam gear pressing the point Ⓐ in the direction of the arrow (see figure). At this time, make sure that the shaft Ⓑ is set as shown in the figure.
  To check up the re-assembly, turn the cam gear in the direction (the same as the point Ⓐ being pressed) shown in the figure. When the cam gear makes a revolution, it clicks and rapidly returns to the original position.

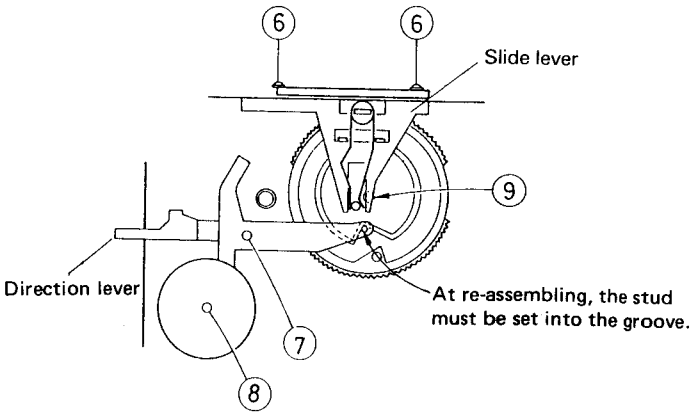


Fig. 6-9

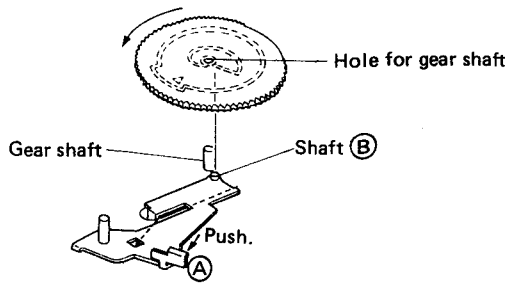


Fig. 6-10

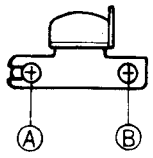
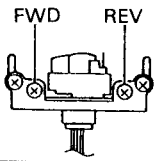
7 Main Adjustments

1. Equipment and measuring instruments used for adjustments

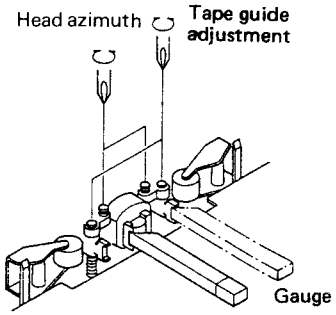
1) Electronic voltmeter
2) Audio frequency oscillator (range; 50–20 kHz and output 0 dB with impedance of 600 Ω)
3) Attenuator (impedance; 600 Ω)
4) Standard tapes for REC/PB
   Maxell UD1– Normal (SF) tape –TS9
   TDK SA – Chrome (SA) tape –TS6
   JVC ME – Metal tape –TS7
5) Reference tape for playback (JVC Test Tape)
   VTT712 (for tape speed, wow flutter adj.)
   VTT724 (for playback level)
   VTT739 (for playback frequency response)
   VTT703 (10 kHz) (for head azimuth adj.)
6) Resistor 600 Ω (for attenuator matching)
7) Distortion meter (bandpass filter)
8) Torque testing cassette gauge, CTG-N
9) Wow flutter meter
10) Frequency counter
11) M300 gauge (for Head and tape guide Adj)

2. Mechanism adjustment procedure

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting motor speed	1. Connect a frequency counter to the LINE OUT terminals. 2. Play back the test tape(VTT712). 3. Adjust for deck [A]: Adjust VR702 for normal speed at 3000 Hz, and VR701 for high speed at 6000 Hz. Adjust for deck [B]: Adjust VR704 for normal speed at 3000 Hz, and VR703 for high speed at 6000 Hz.	Deck [A]: Normal; VR702 High; VR701 Deck [B]: Normal; VR704 High; VR703	Normal speed: Deck [A]; 3000 Hz ± 15 Hz Deck [B]; 3000 Hz ± 15 Hz High speed: Deck [A]; 6000 Hz ± 20 Hz Deck [B]; 6000 Hz ± 20Hz	For adjusting high speed, HI-SPEED test point should be grounded. Adjust high speed after performing normal speed. When adjusting high speed connect the TP1 to ground.
Checking wow and flutter	Connect a wow and flutter meter to LINE OUT terminals and Play back the test tape (VTT712). Check to see if the reading of the meter is within 0.24% (CCIR WTD)		0.24% (CCIR WTD)	If the reading becomes moving value even if confirming to the standard, a re-claim may be raised. Repairs are necessary.
Checking playback torque	Employ a torque testing cassette tape for the checking, or remove the cassette cover and use a torque gauge.		35–75 gr-cm	If the standard torque is not obtained, replace the take-up disk assembly.
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		More than 70 gr-cm	If the standard torque is not obtained, perform the following. 1. Clean the capstan belt, the idler circumference, the motor pulley, the take-up reel disk circumference, the flywheel circumference, etc. 2. Replace the belt and idler.
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		More than 70 gr-cm	If the standard torque is not obtained, clean the capstan belt, idler, motor pulley, flywheel circumference, rewinding idler circumference, left reel disk circumference, etc.
Checking auto-stop opeartion	Play back the tape. In playback mode, check that the tape run stops within 3 sec at the end of the tape. In fastforward or rewind mode, check that the tape stops within 5 sec at the tape end.		Play mode: within 3 sec FF/REW mode: within 5 sec	

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting REC/PB head azimuth	1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Play back the VTT703 test tape. 3. Adjust the head angle with the screw Ⓐ until the reading of the electronic voltmeter becomes maximum for both channels. 4. After adjusting, set the screw with screw bond.	Screw A (left side) Deck [A] FWD/REV for Deck [B]	Maximum	(Deck A)  (Deck B) 

Item	Tape to be used/jig	Standard	Adjustment and checking method	Adjusting points
Tape transport adjustment	M300 gauge and C-90 tape	The tape should not be curled or stretched during travel.	Adjust the tape guide and cassette guide heights so that the gauge passes through the guide smoothly. Confirm it in both forward and reverse directions.	Refer to the illustration below. (Apply screw locking compound after adjustment.)



3. Electrical adjustments location

- **Main Amp P. W. Board (parts assembly side view)**

(Turning in the direction of the arrow increases the level.)

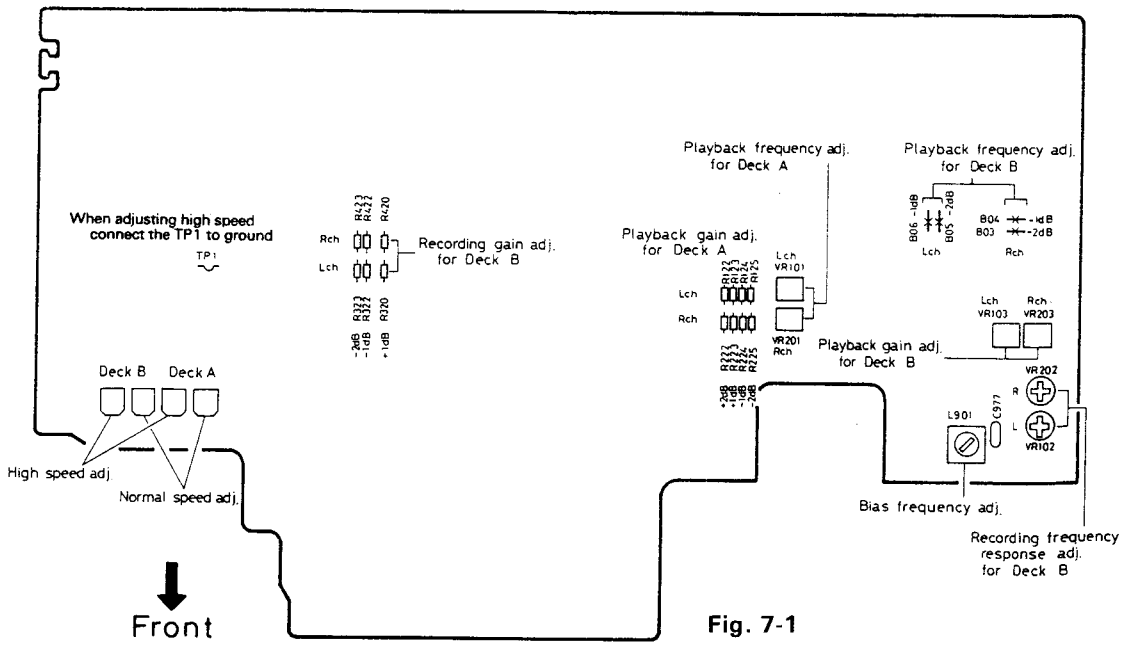
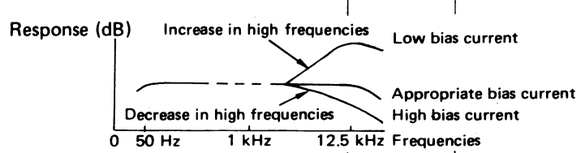
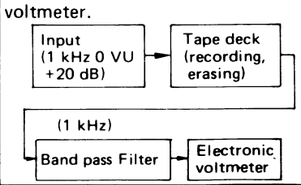

When adjusting high speed connect the TP1 to ground
TP1
Deck B
Deck A
High speed adj.
Normal speed adj.
Front
Recording gain adj. for Deck B
Playback frequency adj. for Deck A
Playback gain adj. for Deck A
Playback frequency adj. for Deck B
Playback gain adj. for Deck B
Bias frequency adj.
Recording frequency response adj. for Deck B

Fig. 7-1

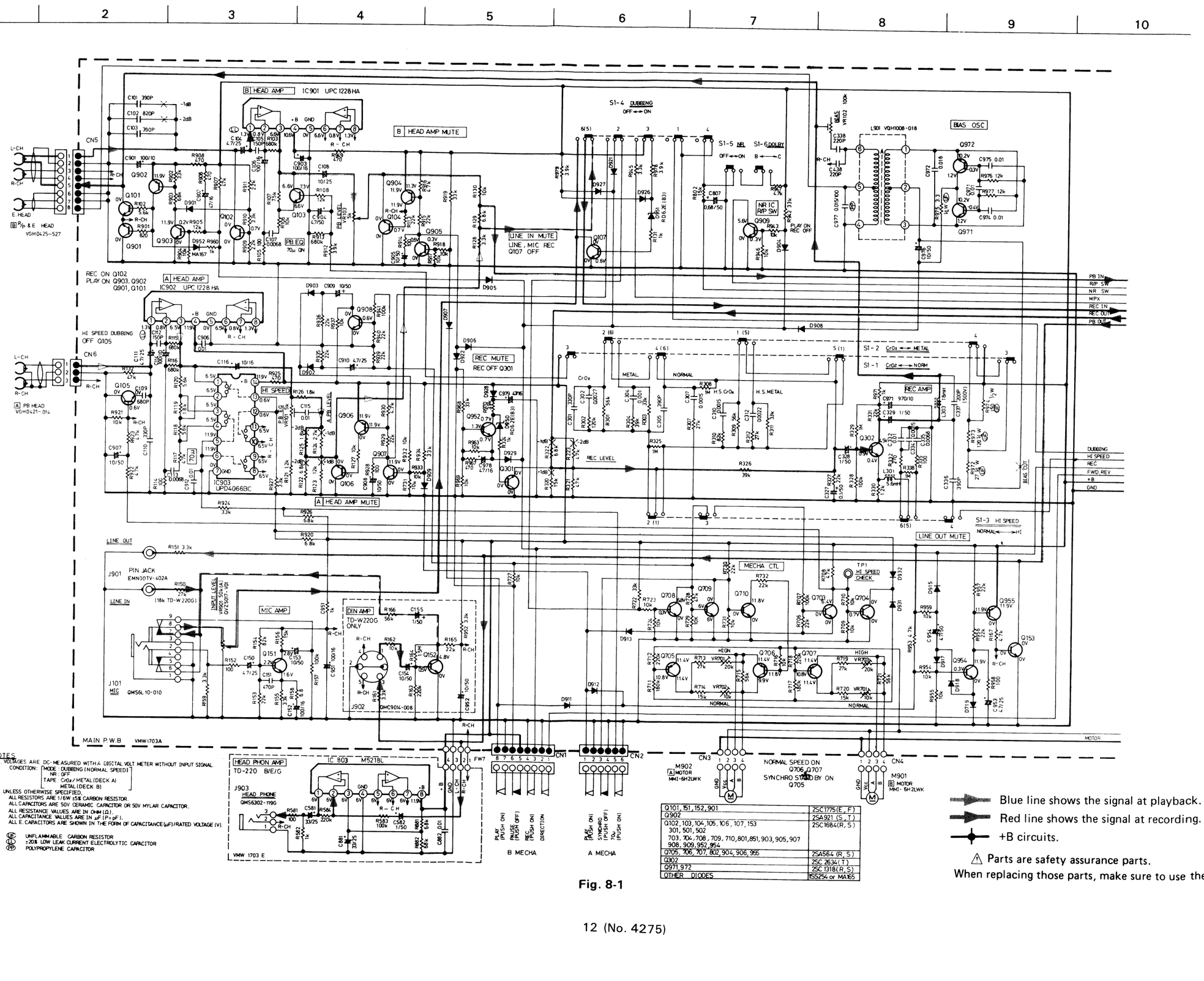
4. Electrical circuit adjustment procedure

Perform the tape transport checks and head azimuth adjustment before following checks and adjustments.
Adjustment should be performed in the order of alignment steps.
In the steps marked with an asterisk (*), adjustment should be performed after replacing the heads.
Perform this adjustment with the NR switch set to OFF.

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
*1	Confirming playback gain	Play back VTT724, then confirm that the level at LINE OUT is [A] −7dBs ± 1.5 dB, [B] −8 dBm ± 0.5 dB Deck A Disconnect R125, R225/R124, R224/R123, 223/R122, R222 so that the outputs level becomes −7 dBs. Deck B Adjust VR103 and 203 until the out put level becomes −8 dBs.	Deck A L:R122, R123 R224, R125 R:R222, R223 R224, R225 Deck B VR103 VR203	[A] −7 ±1.5dB [B] −8 ±0.5dB	When the head is replaced, adjust playback level. Deck A L:R122 cut by + 2 dB R123 cut by + 1 dB R124 cut by − 1 dB R125 cut by − 2 dB R:R222 cut by + 2 dB R223 cut by + 1 dB R224 cut by − 1 dB R225 cut by − 2 dB
*2	Playback frequency response	Deck A: Play back VTT739, then confirm that the level of 1 kHz and 10 kHz signals is 0 ± 0.5 dB. Deck B: Disconnect B05, B03 and B06, B04 so that the outputs of 1 kHz and 10 kHz signals are flat.	DeckA L:VR101 R:VR201 DeckB L:B05, B06 R:B03, B04	Deck A: 0 ±0.5dB Deck B: 0 ± 0.5dB	L:B05 cut by − 2dB B06 cut by − 1dB R:B03 cut by − 2dB B04 cut by − 1dB
*3	Adjusting bias frequency	Connect the frequency counter to the C977 Lead through a 1 MΩ resistor, then adjust L901 so that the counter reads 81 kHz.	L901	81 kHz ±1 kHz	METAL Position
*4	Recording frequency response	1) NR switch: OFF 2) Record a 1 kHz signal at an input reference level of −20 dB, then record 50 Hz and 12.5 kHz signals and play them back. At this time, adjust VR102 and VR202 so that the deviation of 50 Hz and 12.5 kHz outputs satisfy the standard values with respect to 1 kHz output. 	For Normal tape: L:VR102 R:VR202	With respect to 1 kHz reference: At 50 Hz, 0 ± 3 dB; At 12.5 kHz, 0.5 ± 3 dB	CrO_2 50Hz 0 ±3dB 12.5kHz 0 ±4dB Metal 50Hz 0±3dB 12.5kHz + 1 ±4dB Deck [B]:Tape selected manually.

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
5	Recording gain	1) Apply a 1kHz signal to the LINE IN terminals, record a 1kHz signal at 0 dB input for both L and R channels on a normal tape. 2) Play back the recorded part, and adjust the recording level controls so that LINE OUT terminal level becomes −8 dBs with peak level indicator reading 0.	For Normal tape: L:R323 R322 R320 R:R423 R422 R420	−8 ± 1.5dB (CrO_2 −8 ± 2.5dB Metal −8 ± 2.5dB)	Perform the adjustment using a normal tape. Level difference between recording and playback for CrO_2 and metal tapes should be less than 1.5 dB, and that between left and right channels should also be less than 1 dB. L:R323 cut by − 2dB R322 cut by − 1dB R320 cut by + 1dB R:R423 cut by − 2dB R422 cut by − 1dB R420 cut by + 1dB
6	Checking record/ playback distortion	1) Record a 1 kHz, −8dBs signal to LINE IN terminals and perform recording with the peak level indicator reading 0. 2) Play back the recorded part. Check the output with a distortion meter to see if the value conforms to the standard value.		Normal tape: Less than 2% CrO_2 tape: Less than 3% Metal tape: Less than 2% (THD)	Be sure to perform this checking following bias current and recording level checking.
7	Checking signal to nosie ratio in recording/ playback	1) Record a 1 kHz, 0 dB signal. Stop the input by disconnecting from the terminal to perform non-signal recording. 2) Play back the recorded part. Measure the 0 dB recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.		Normal, CrO_2 & Metal tapes: More than 42 dB	Apply an input level to LINE IN terminals with the recording level controls set to maximum so that the peak level indicator reads 0 dB.
8	Checking erasing coefficient	1) Apply a 1 kHz signal to the LINE IN terminals. Adjust the recording level controls until the peak level indicator reads 0 dB. 2) Perform recording with the signal enhanced by 20 dB. 3) Erase a part of the recording. 4) Measure the output difference between the erased part and non-erased part to compare with an electronic voltmeter.		More than 65 dB	For the measurement using a metal tape, connect a band pass filter between the deck and the electronic voltmeter. 

8 Standard Schematic Diagrams



NOTES:
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
CONDITION: [MODE : DUBBING (NORMAL SPEED) NR : OFF TAPE : CrO2 / METAL (DECK A) METAL (DECK B)]
2. UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM (Ω).
ALL CAPACITANCE VALUES ARE IN μF (P: pF).
ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF) / RATED VOLTAGE (V).
(UF) UNFLAMMABLE CARBON RESISTOR
(UL) ±20% LOW LEAK CURRENT ELECTROLYTIC CAPACITOR
(PP) POLYPROPYLENE CAPACITOR

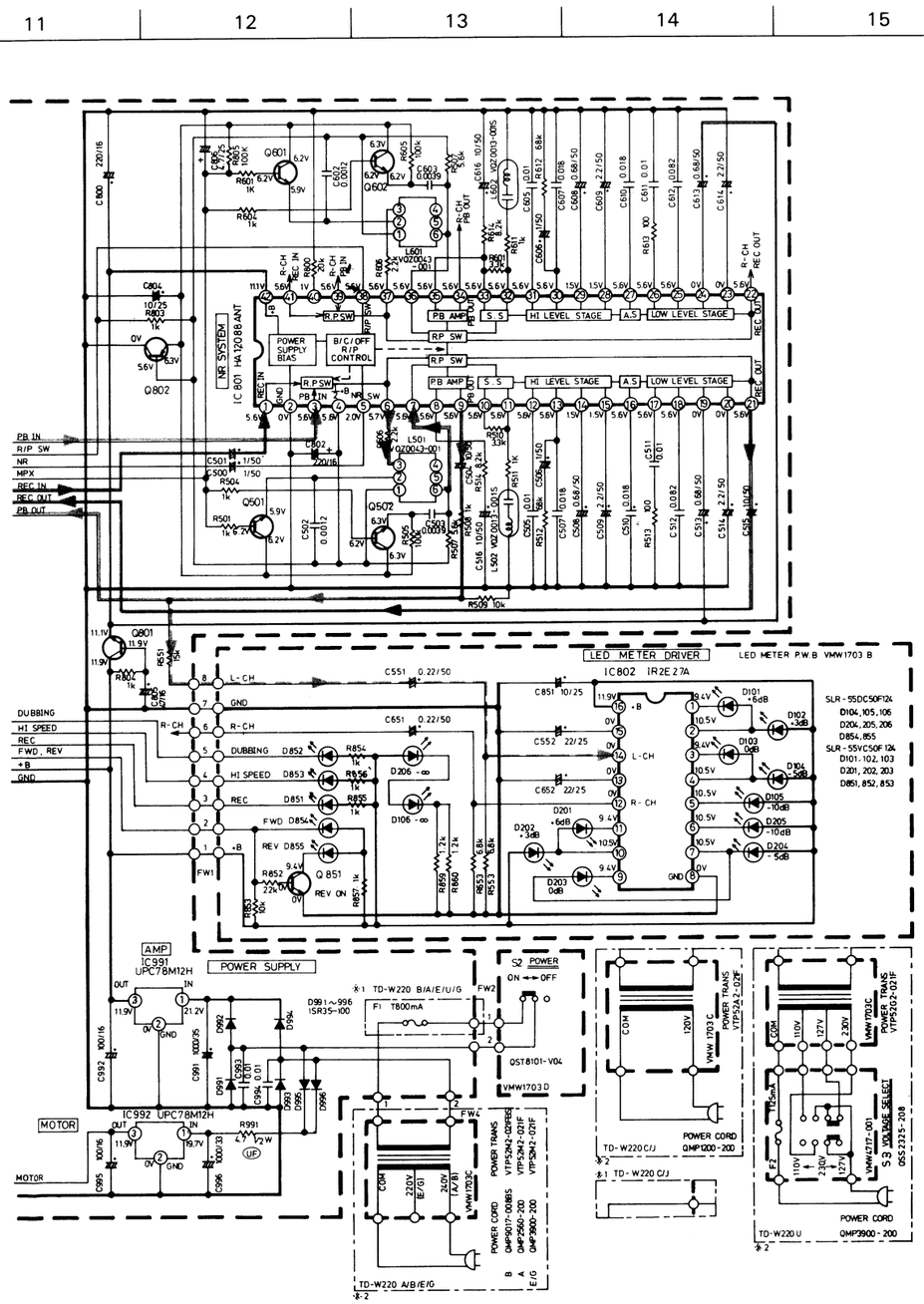
Q101, 151, 152, 901	2SC1775(E, F)
Q902	2SA921 (S, T)
Q102, 103, 104, 105, 106, 107, 153 301, 501, 502 703, 704, 708, 709, 710, 801, 851, 903, 905, 907 908, 909, 952, 954	2SC1684(R, S)
Q705, 706, 707, 802, 904, 906, 955	2SA564 (R, S)
Q902	2SC2634(T)
Q971, 972	2SC1318(R, S)
OTHER DIODES	1SS254 or MA165

Blue line shows the signal at playback.
Red line shows the signal at recording.
+B circuits.

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Fig. 8-1

9 Block Diagrams



Blue line shows the signal at playback.

Red line shows the signal at recording.

+B line.

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Fig. 8-2

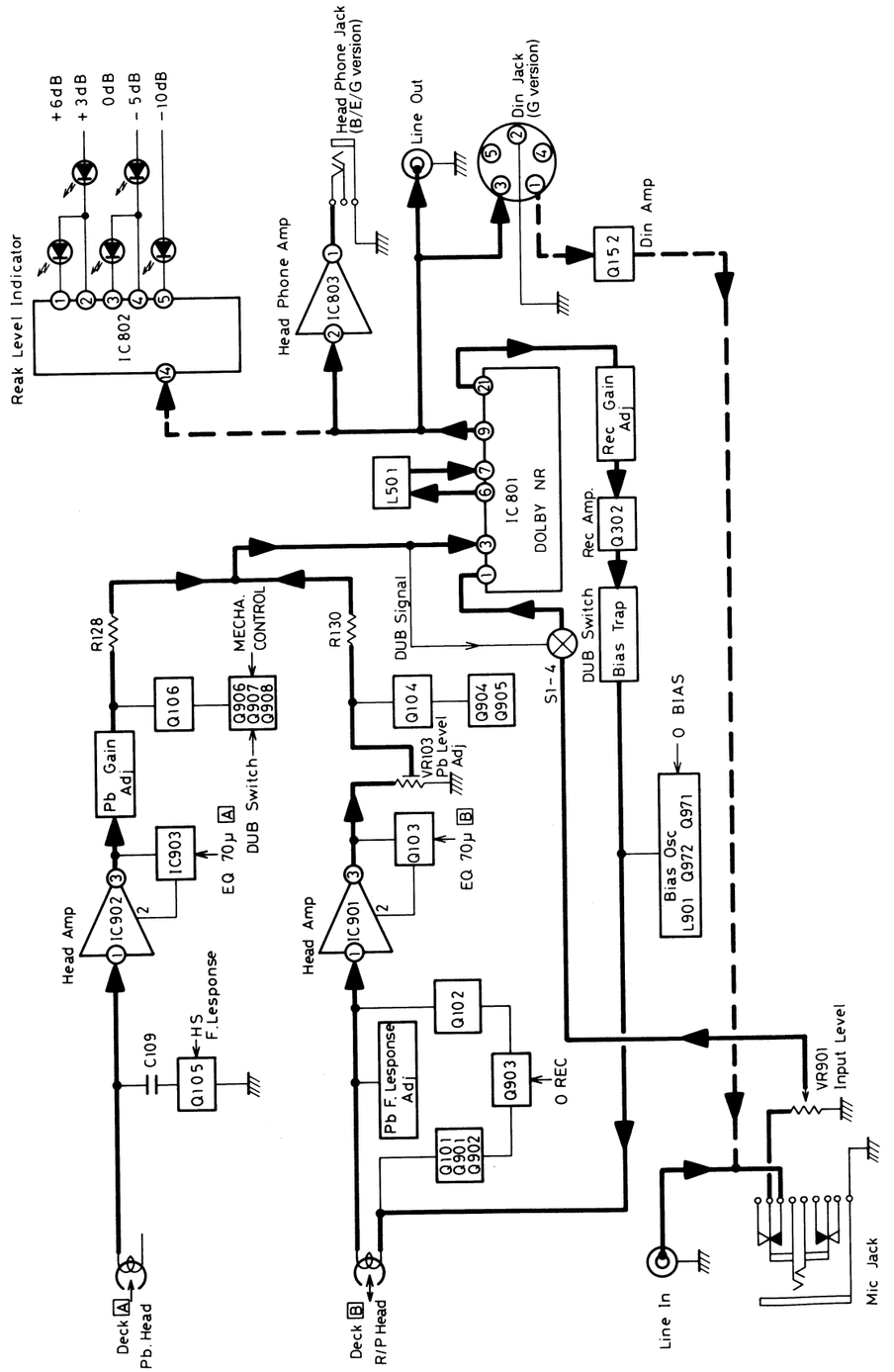
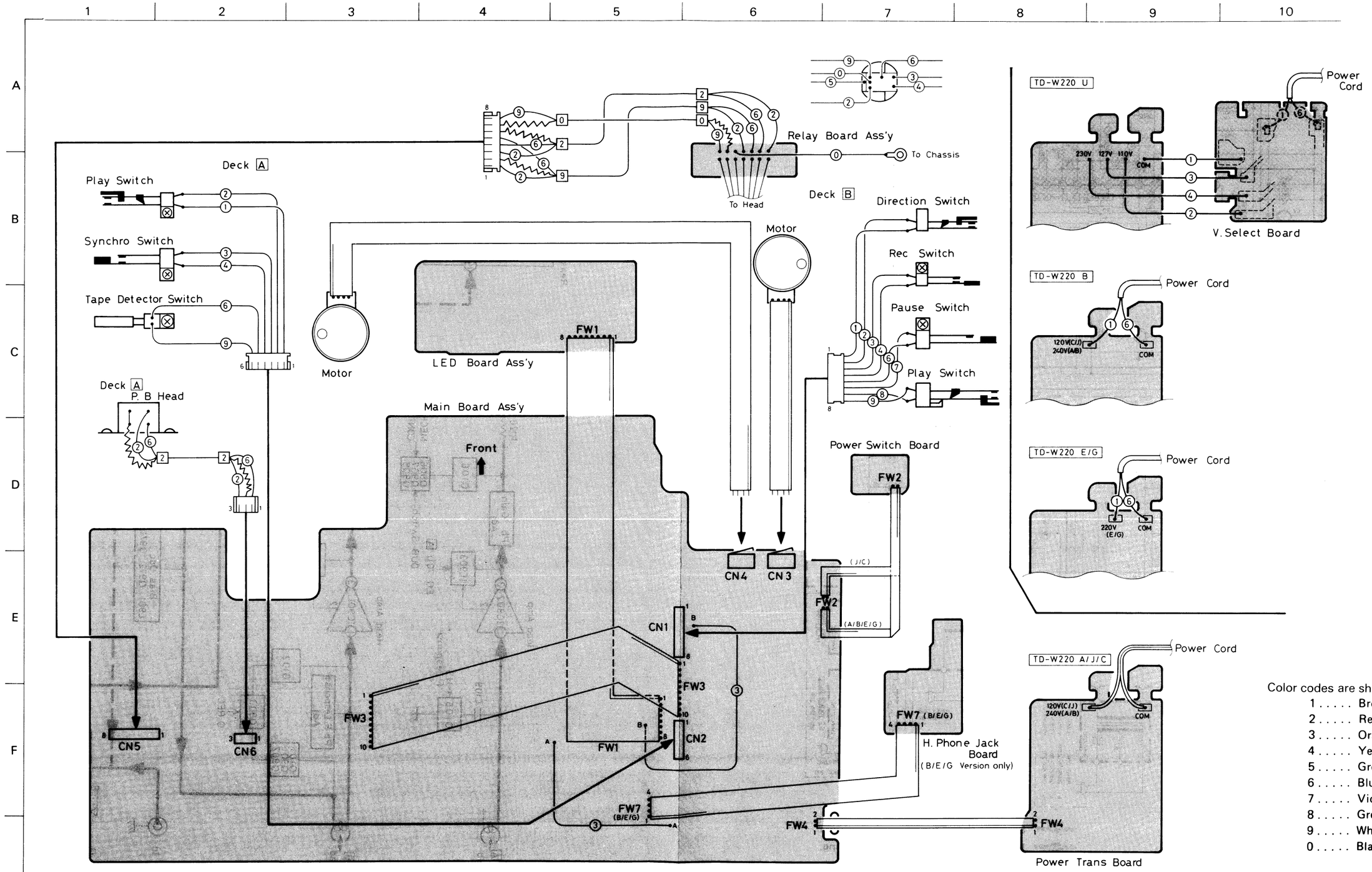


Fig. 9-1

10 Wiring Connections

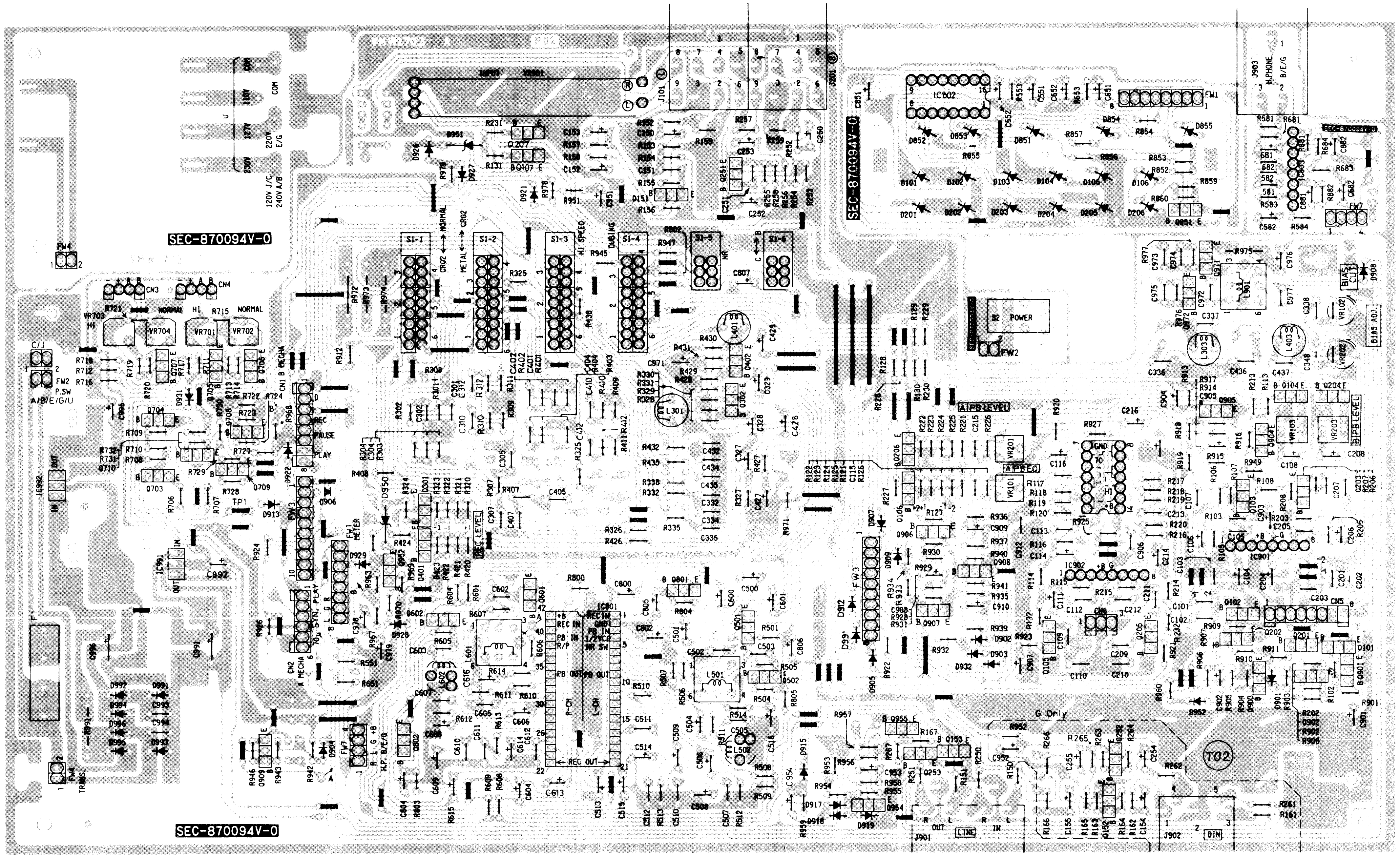


Color codes are shown below.

1 . . . . . Brown
2 . . . . . Red
3 . . . . . Orange
4 . . . . . Yellow
5 . . . . . Green
6 . . . . . Blue
7 . . . . . Violet
8 . . . . . Grey
9 . . . . . White
0 . . . . . Black

Fig. 10-1

11 Location of P.C. Board Parts and Parts List



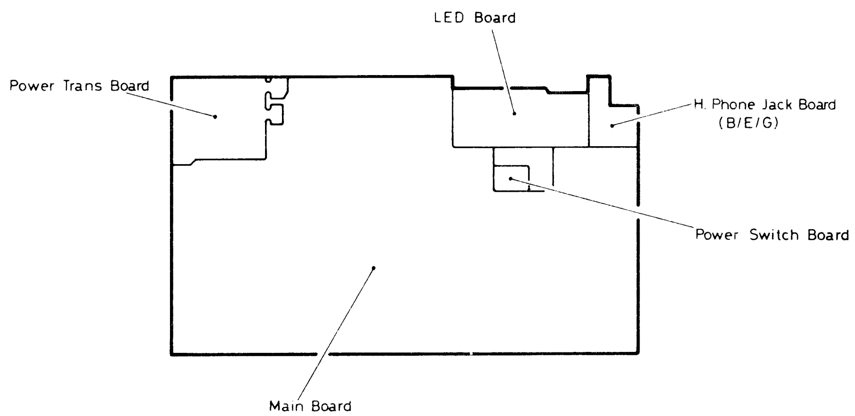
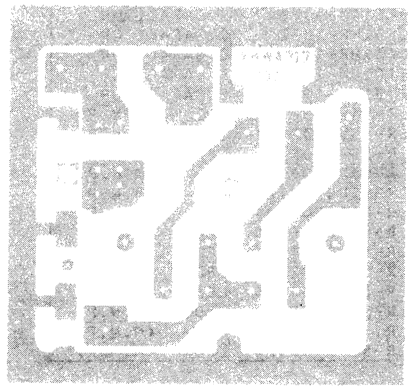


Fig. 11-1

V. Select Switch Board (U:Version)



Parts No.	Parts Name
QSS2325-208	Slide Switch
VMZ0043-001S	Fuse Clamp
VND4003-046	Fuse Label

P.C. Board Parts List

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF. NO	PARTS NO.	PARTS NAME
	C101	QCS31HJ-391Z	C.CAPACITOR
	C102	QCS31HJ-821Z	C CAPACITOR
	C103	QCS31HJ-391Z	C.CAPACITOR
	C104	QEB61EM-475ZM	LLC E CAPACITOR
	C105	QCS31HJ-151Z	C CAPACITOR
	C106	QETC1CM-107ZN	E CAPACITOR
	C107	QFN31HJ-682Z	M CAPACITOR
	C108	QETC1HM-106ZN	E CAPACITOR
	C109	QCS31HJ-681Z	C CAPACITOR
	C110	QCS31HJ-331Z	C.CAPACITOR
	C111	QEB61EM-475ZM	LLC E CAPACITOR
	C112	QCS31HJ-151Z	C CAPACITOR
	C113	QFN31HJ-682Z	M CAPACITOR
	C114	QETC1CM-107ZN	E CAPACITOR
	C115	QFV71HJ-103ZM	TF.CAPACITOR
	C116	QETC1HM-106ZN	E CAPACITOR
	C150	QETC1EM-475ZM	E.CAPACITOR
	C151	QCS31HJ-471Z	C.CAPACITOR
	C152	QETB1CM-107N	E CAPACITOR
	C153	QETC1HM-106ZN	E CAPACITOR
	C154	QETC1HM-106ZN	E CAPACITOR
	C155	QETC1HM-105ZN	E CAPACITOR
	C201	QCS31HJ-391Z	C.CAPACITOR
	C202	QCS31HJ-821Z	C CAPACITOR
	C203	QCS31HJ-391Z	C.CAPACITOR
	C204	QEB61EM-475ZM	LLC E CAPACITOR
	C205	QCS31HJ-151Z	C CAPACITOR
	C206	QETC1CM-107ZN	E CAPACITOR
	C207	QFN31HJ-682Z	M CAPACITOR
	C208	QETC1HM-106ZN	E CAPACITOR
	C209	QCS31HJ-681Z	C CAPACITOR
	C210	QCS31HJ-331Z	C.CAPACITOR
	C211	QEB61EM-475ZM	LLC E CAPACITOR
	C212	QCS31HJ-151Z	C CAPACITOR
	C213	QFN31HJ-682Z	M CAPACITOR
	C214	QETC1CM-107ZN	E CAPACITOR
	C215	QFV71HJ-103ZM	TF.CAPACITOR
	C216	QETC1HM-106ZN	E CAPACITOR
	C250	QETC1EM-475ZM	E.CAPACITOR
	C251	QCS31HJ-471Z	C.CAPACITOR
	C252	QETC1CM-107ZN	E CAPACITOR
	C253	QETC1HM-106ZN	E CAPACITOR
	C254	QETC1HM-106ZN	E CAPACITOR
	C255	QETC1HM-105ZN	E CAPACITOR
	C301	QCS31HJ-331Z	C.CAPACITOR
	C302	QFN31HJ-272Z	M.CAPACITOR
	C304	QFN31HJ-102Z	M.CAPACITOR
	C305	QCS31HJ-391Z	C.CAPACITOR
	C307	QFN31HJ-152Z	M.CAPACITOR
	C310	QFN31HJ-152Z	M.CAPACITOR
	C312	QFN31HJ-222Z	M CAPACITOR
	C327	QFV71HJ-124ZM	TF CAPACITOR
	C328	QETC1HM-105ZN	E CAPACITOR
	C329	QETC1HM-105ZN	E CAPACITOR
	C332	QFV71HJ-103ZM	TF.CAPACITOR
	C334	QFN31HJ-152Z	M.CAPACITOR
	C335	QFN31HJ-682Z	M CAPACITOR
	C336	QCS31HJ-391Z	C.CAPACITOR
	C337	QCS12HJ-201V	C.CAPACITOR
	C338	QCS31HJ-221Z	C.CAPACITOR
	C401	QCS31HJ-331Z	C.CAPACITOR
	C402	QFN31HJ-272Z	M.CAPACITOR
	C404	QFN31HJ-102Z	M.CAPACITOR
	C405	QCS31HJ-391Z	C.CAPACITOR
	C407	QFN31HJ-152Z	M.CAPACITOR
	C410	QFN31HJ-152Z	M.CAPACITOR
	C412	QFN31HJ-222Z	M CAPACITOR
	C427	QFV71HJ-124ZM	TF CAPACITOR
	C428	QETC1HM-105ZN	E CAPACITOR
	C429	QETC1HM-105ZN	E CAPACITOR
	C432	QFV71HJ-103ZM	TF.CAPACITOR
	C434	QFN31HJ-152Z	M.CAPACITOR
	C435	QFN31HJ-682Z	M CAPACITOR
	C436	QCS31HJ-391Z	C.CAPACITOR
	C437	QCS12HJ-201V	C.CAPACITOR
	C438	QCS31HJ-221Z	C.CAPACITOR
	C500	QETC1HM-105ZN	E CAPACITOR
	C501	QETC1HM-105ZN	E CAPACITOR
	C502	QFN31HJ-122Z	M.CAPACITOR
	C503	QFN31HJ-392Z	M CAPACITOR
	C504	QETC1HM-106ZN	E CAPACITOR
	C505	QFV71HJ-103ZM	TF.CAPACITOR
	C506	QETC1HM-105ZN	E CAPACITOR
	C507	QFV71HJ-183ZM	TF.CAPACITOR
	C508	QETC1HM-684ZN	E CAPACITOR

⚠	REF. NO	PARTS NO.	PARTS NAME
	C509	QETC1HM-225ZN	E CAP
	C510	QFV71HJ-183ZM	TF.CAPACITOR
	C511	QFV71HJ-103ZM	TF.CAPACITOR
	C512	QFV71HJ-823ZM	TF CAPACITOR
	C513	QETC1HM-684ZN	E CAPACITOR
	C514	QETC1HM-225ZN	E CAP
	C515	QETC1HM-106ZN	E CAPACITOR
	C516	QETC1HM-106ZN	E CAPACITOR
	C551	QETC1HM-224ZN	E CAPACITOR
	C552	QETC1EM-226ZN	E CAPACITOR
	C581	QET61ER-336ZM	E CAPACITOR
	C582	QETC1HM-105ZN	E CAPACITOR
	C600	QETC1HM-105ZN	E CAPACITOR
	C601	QETC1HM-105ZN	E CAPACITOR
	C602	QFN31HJ-122Z	M.CAPACITOR
	C603	QFN31HJ-392Z	M CAPACITOR
	C604	QETC1HM-106ZN	E CAPACITOR
	C605	QFV71HJ-103ZM	TF.CAPACITOR
	C606	QETC1HM-105ZN	E CAPACITOR
	C607	QFV71HJ-183ZM	TF.CAPACITOR
	C608	QETC1HM-684ZN	E CAPACITOR
	C609	QETC1HM-225ZN	E CAP
	C610	QFV71HJ-183ZM	TF.CAPACITOR
	C611	QFV71HJ-103ZM	TF.CAPACITOR
	C612	QFV71HJ-823ZM	TF CAPACITOR
	C613	QETC1HM-684ZN	E CAPACITOR
	C614	QETC1HM-225ZN	E CAP
	C615	QETC1HM-106ZN	E CAPACITOR
	C616	QETC1HM-106ZN	E CAPACITOR
	C651	QETC1HM-224ZN	E CAPACITOR
	C652	QETC1EM-226ZN	E CAPACITOR
	C681	QET61ER-336ZM	E CAPACITOR
	C682	QETC1HM-105ZN	E CAPACITOR
	C800	QETC1CM-227ZM	E.CAPACITOR
	C802	QETC1CM-227ZM	E.CAPACITOR
	C804	QETC1HM-106ZN	E CAPACITOR
	C805	QETC1CM-476ZN	E CAPACITOR
	C806	QETC1EM-475ZM	E.CAPACITOR
	C807	QETC1HM-684ZN	E CAPACITOR
	C851	QETC1HM-106ZN	E CAPACITOR
	C881	QET61ER-336ZM	E CAPACITOR
	C882	QCF31HP-103Z	C.CAPACITOR
	C901	QETC1CM-107ZN	E CAPACITOR
	C902	QETC1CM-476ZN	E CAPACITOR
	C903	QETC1CM-107ZN	E CAPACITOR
	C904	QETC1EM-475ZM	E.CAPACITOR
	C905	QETC1HM-106ZN	E CAPACITOR
	C906	QCF31HP-103Z	C.CAPACITOR
	C907	QETC1HM-106ZN	E CAPACITOR
	C908	QETC1HM-106ZN	E CAPACITOR
	C909	QETC1HM-106ZN	E CAPACITOR
	C910	QETC1EM-475ZM	E.CAPACITOR
	C912	QCF31HP-103Z	C.CAPACITOR
	C951	QETC1CM-107ZN	E CAPACITOR
	C952	QETC1HM-106ZN	E CAPACITOR
	C953	QETC1EM-475ZM	E.CAPACITOR
	C954	QETC1EM-475ZM	E.CAPACITOR
	C971	QETC1CM-477ZN	E CAPACITOR
	C972	QFV71HJ-183ZM	TF.CAPACITOR
	C973	QFV71HJ-103ZM	TF.CAPACITOR
	C974	QFV71HJ-103ZM	TF.CAPACITOR
	C975	QFV71HJ-103ZM	TF.CAPACITOR
	C976	QETC1HM-106ZN	E CAPACITOR
	C977	QFP82AJ-153	P.P.CAPACITOR
	C978	QETC1CM-476ZN	E CAPACITOR
	C979	QETC1CM-476ZN	E CAPACITOR
	C991	QET51VR-108N	E CAPACITOR
	C992	QETC1CM-107ZN	E CAPACITOR
	C993	QCF31HP-103Z	C.CAPACITOR
	C994	QCF31HP-103Z	C.CAPACITOR
	C995	QETC1CM-107ZN	E CAPACITOR
	C996	QET51VR-108N	E CAPACITOR
	D101	SLR-55VC50F124	LED (M.N.P)
	D102	SLR-55VC50F124	LED (M.N.P)
	D103	SLR-55VC50F124	LED (M.N.P)
	D104	SLR-55DC50F124	LED (M.N.P)
	D105	SLR-55DC50F124	LED (M.N.P)
	D106	SLR-55DC50F124	LED (M.N.P)
	D201	SLR-55VC50F124	LED (M.N.P)
	D202	SLR-55VC50F124	LED (M.N.P)
	D203	SLR-55VC50F124	LED (M.N.P)
	D204	SLR-55DC50F124	LED (M.N.P)
	D205	SLR-55DC50F124	LED (M.N.P)
	D206	SLR-55DC50F124	LED (M.N.P)
	D851	SLR-55VC50F124	LED (M.N.P)

⚠	REF. NO	PARTS NO.	PARTS NAME
	D852	SLR-55VC50F124	LED (M.N.P)
	D853	SLR-55VC50F124	LED (M.N.P)
	D854	SLR-55DC50F124	LED (M.N.P)
	D855	SLR-55DC50F124	LED (M.N.P)
	D901	1SS254T-77	SI DIODE
	D902	1SS254T-77	SI DIODE
	D903	1SS254T-77	SI DIODE
	D904	1SS254T-77	SI DIODE
	D905	1SS254T-77	SI DIODE
	D906	1SS254T-77	SI DIODE
	D907	1SS254T-77	SI DIODE
	D908	1SS254T-77	SI DIODE
	D909	1SS254T-77	SI DIODE
	D911	1SS254T-77	SI DIODE
	D912	1SS254T-77	SI DIODE
	D913	1SS254T-77	SI DIODE
	D915	1SS254T-77	SI DIODE
	D917	1SS254T-77	SI DIODE
	D918	1SS254T-77	SI DIODE
	D919	1SS254T-77	SI DIODE
	D921	1SS254T-77	SI DIODE
	D922	1SS254T-77	SI DIODE
	D926	1SS254T-77	SI DIODE
	D927	1SS254T-77	SI DIODE
	D928	1SS254T-77	SI DIODE
	D929	1SS254T-77	SI DIODE
	D931	1SS254T-77	SI DIODE
	D932	1SS254T-77	SI DIODE
	D950	RD6.2E(B3)	Z DIODE
	D951	RD6.2E(B3)	Z DIODE
	D952	MA167-TA5	DIODE
⚠	D991	1SR35-100AT-93	SI DIODE
⚠	D992	1SR35-100AT-93	SI DIODE
⚠	D993	1SR35-100AT-93	SI DIODE
⚠	D994	1SR35-100AT-93	SI DIODE
⚠	D995	1SR35-100AT-93	SI DIODE
⚠	D996	1SR35-100AT-93	SI DIODE
	IC801	HA12088ANT	DOLBY IC
	IC802	IR2E27A	I.C
	IC803	M5218L	I.C
	IC901	UPC1228HA	IC
	IC902	UPC1228HA	IC
	IC903	UPD4066BC	I.C
⚠	IC991	UPC78M12H	I.C.
⚠	IC992	UPC78M12H	I.C.
	J101	QMS6L10-010	MIC JACK
	J201	QMS6L10-010	MIC JACK
	J901	EMN00TV-402A	PIN JACK
	J903	QMS6302-119G	JACK
	L301	VQP0001-562S	INDUCTOR
	L303	VQP0001-183S	INDUCTOR
	L401	VQP0001-562S	INDUCTOR
	L403	VQP0001-183S	INDUCTOR
	L501	VQZ0043-001	MPX FILTER
	L502	VQL0013-001S	FILTER
	L601	VQZ0043-001	MPX FILTER
	L602	VQZ0013-001S	FILTER
	L901	VQH1008-018	OSC COIL(BIAS)
	Q101	2SC1775A(E,F)TZ	TRANSISTOR
	Q102	2SC1684(R,S)TA	TRANSISTOR
	Q103	2SC1684(R,S)TA	TRANSISTOR
	Q104	2SC1684(R,S)TA	TRANSISTOR
	Q105	2SC1684(R,S)TA	TRANSISTOR
	Q106	2SC1684(R,S)TA	TRANSISTOR
	Q107	2SC1684(R,S)TA	TRANSISTOR
	Q151	2SC1775A(E,F)TZ	TRANSISTOR
	Q152	2SC1775A(E,F)TZ	TRANSISTOR
	Q153	2SC1684(R,S)TA	TRANSISTOR
	Q201	2SC1775A(E,F)TZ	TRANSISTOR
	Q202	2SC1684(R,S)TA	TRANSISTOR
	Q203	2SC1684(R,S)TA	TRANSISTOR
	Q204	2SC1684(R,S)TA	TRANSISTOR
	Q205	2SC1684(R,S)TA	TRANSISTOR
	Q206	2SC1684(R,S)TA	TRANSISTOR
	Q207	2SC1684(R,S)TA	TRANSISTOR
	Q251	2SC1775A(E,F)TZ	TRANSISTOR
	Q252	2SC1775A(E,F)TZ	TRANSISTOR
	Q253	2SC1684(R,S)TA	TRANSISTOR
	Q301	2SC1684(R,S)TA	TRANSISTOR
	Q302	2SC2634(T)	TRANSISTOR
	Q401	2SC1684(R,S)TA	TRANSISTOR
	Q402	2SC2634(T)	TRANSISTOR
	Q501	2SC1684(R,S)TA	TRANSISTOR
	Q502	2SC1684(R,S)TA	TRANSISTOR
	Q601	2SC1684(R,S)TA	TRANSISTOR

⚠	REF. NO	PARTS NO.	PARTS NAME
	Q602	2SC1684(R,S)TA	TRANSISTOR
	Q703	2SC1684(R,S)TA	TRANSISTOR
	Q704	2SC1684(R,S)TA	TRANSISTOR
	Q705	2SA564(R,S)TA	TRANSISTOR
	Q706	2SA564(R,S)TA	TRANSISTOR
	Q707	2SA564(R,S)TA	TRANSISTOR
	Q708	2SC1684(R,S)TA	TRANSISTOR
	Q709	2SC1684(R,S)TA	TRANSISTOR
	Q710	2SC1684(R,S)TA	TRANSISTOR
	Q801	2SC1684(R,S)TA	TRANSISTOR
	Q802	2SA564(R,S)TA	TRANSISTOR
	Q851	2SC1684(R,S)TA	TRANSISTOR
	Q901	2SC1775A(E,F)TZ	TRANSISTOR
	Q902	2SA921(S,T)TA	TRANSISTOR
	Q903	2SC1684(R,S)TA	TRANSISTOR
	Q904	2SA564(R,S)TA	TRANSISTOR
	Q905	2SC1684(R,S)TA	TRANSISTOR
	Q906	2SA564(R,S)TA	TRANSISTOR
	Q907	2SC1684(R,S)TA	TRANSISTOR
	Q908	2SC1684(R,S)TA	TRANSISTOR
	Q909	2SC1684(R,S)TA	TRANSISTOR
	Q952	2SC1684(R,S)TA	TRANSISTOR
	Q954	2SC1684(R,S)TA	TRANSISTOR
	Q955	2SA564(R,S)TA	TRANSISTOR
	Q971	2SC1318(R,S)	TRANSISTOR
	Q972	2SC1318(R,S)	TRANSISTOR
	R102	QRD161J-562Y	CARBON RESISTOR
	R103	QRD161J-684Y	CARBON RESISTOR
	R105	QRD161J-101Y	CARBON RESISTOR
	R106	QRD161J-103Y	CARBON RESISTOR
	R107	QRD161J-752Y	C RESISTOR
	R108	QRD161J-123Y	CARBON RESISTOR
	R113	QRD161J-223Y	CARBON RESISTOR
	R114	QRD161J-101Y	CARBON RESISTOR
	R115	QRD161J-684Y	CARBON RESISTOR
	R116	QRD161J-684Y	CARBON RESISTOR
	R117	QRD161J-472Y	CARBON RESISTOR
	R118	QRD161J-562Y	CARBON RESISTOR
	R119	QRD161J-182Y	C RESISTOR
	R120	QRD161J-562Y	CARBON RESISTOR
	R121	QRD161J-122Y	CARBON RESISTOR
	R122	QRD161J-682Y	CARBON RESISTOR
	R123	QRD161J-123Y	CARBON RESISTOR
	R124	QRD161J-272Y	CARBON RESISTOR
	R125	QRD161J-182Y	C RESISTOR
	R126	QRD161J-182Y	C RESISTOR
	R127	QRD161J-103Y	CARBON RESISTOR
	R128	QRD161J-332Y	CARBON RESISTOR
	R129	QRD161J-682Y	CARBON RESISTOR
	R130	QRD161J-103Y	CARBON RESISTOR
	R131	QRD161J-102Y	CARBON RESISTOR
	R132	QRD161J-473Y	CARBON RESISTOR
	R150	QRD161J-183Y	CARBON RESISTOR
	R151	QRD161J-332Y	CARBON RESISTOR
	R152	QRD161J-101Y	CARBON RESISTOR
	R153	QRD161J-223Y	CARBON RESISTOR
	R154	QRD161J-823Y	CARBON RESISTOR
	R155	QRD161J-332Y	CARBON RESISTOR
	R156	QRD161J-153Y	CARBON RESISTOR
	R157	QRD161J-104Y	CARBON RESISTOR
	R158	QRD161J-6R8Y	C RESISTOR
	R159	QRD161J-332Y	CARBON RESISTOR
	R161	QRD161J-332Y	CARBON RESISTOR
	R162	QRD161J-103Y	CARBON RESISTOR
	R163	QRD161J-224Y	CARBON RESISTOR
	R164	QRD161J-155Y	CARBON RESISTOR
	R165	QRD161J-223Y	CARBON RESISTOR
	R166	QRD161J-563Y	C RESISTOR
	R167	QRD161J-472Y	CARBON RESISTOR
	R202	QRD161J-472Y	CARBON RESISTOR
	R203	QRD161J-684Y	CARBON RESISTOR
	R205	QRD161J-101Y	CARBON RESISTOR
	R206	QRD161J-103Y	CARBON RESISTOR
	R207	QRD161J-752Y	C RESISTOR
	R208	QRD161J-123Y	CARBON RESISTOR
	R213	QRD161J-223Y	CARBON RESISTOR
	R214	QRD161J-101Y	CARBON RESISTOR
	R215	QRD161J-684Y	CARBON RESISTOR
	R216	QRD161J-684Y	CARBON RESISTOR
	R217	QRD161J-472Y	CARBON RESISTOR
	R218	QRD161J-562Y	CARBON RESISTOR
	R219	QRD161J-182Y	C RESISTOR
	R220	QRD161J-562Y	CARBON RESISTOR
	R221	QRD161J-122Y	CARBON RESISTOR
	R222	QRD161J-682Y	CARBON RESISTOR

⚠	REF. NO	PARTS NO.	PARTS NAME
	R223	QRD161J-123Y	CARBON RESISTOR
	R224	QRD161J-272Y	CARBON RESISTOR
	R225	QRD161J-182Y	C RESISTOR
	R226	QRD161J-182Y	C RESISTOR
	R227	QRD161J-103Y	CARBON RESISTOR
	R228	QRD161J-332Y	CARBON RESISTOR
	R229	QRD161J-682Y	CARBON RESISTOR
	R230	QRD161J-103Y	CARBON RESISTOR
	R231	QRD161J-102Y	CARBON RESISTOR
	R232	QRD161J-473	CARBON RESISTOR
	R250	QRD161J-273Y	CARBON RESISTOR
	R251	QRD161J-332Y	CARBON RESISTOR
	R252	QRD161J-101Y	CARBON RESISTOR
	R253	QRD161J-223Y	CARBON RESISTOR
	R254	QRD161J-823Y	CARBON RESISTOR
	R255	QRD161J-332Y	CARBON RESISTOR
	R256	QRD161J-153Y	CARBON RESISTOR
	R257	QRD161J-104Y	CARBON RESISTOR
	R258	QRD161J-6R8Y	C RESISTOR
	R259	QRD161J-332Y	CARBON RESISTOR
	R261	QRD161J-332Y	CARBON RESISTOR
	R262	QRD161J-103Y	CARBON RESISTOR
	R263	QRD161J-224Y	CARBON RESISTOR
	R264	QRD161J-155Y	CARBON RESISTOR
	R265	QRD161J-223Y	CARBON RESISTOR
	R266	QRD161J-563Y	C RESISTOR
	R267	QRD161J-472Y	CARBON RESISTOR
	R301	QRD161J-563Y	C RESISTOR
	R302	QRD161J-124Y	CARBON RESISTOR
	R303	QRD161J-333Y	CARBON RESISTOR
	R304	QRD161J-393Y	CARBON RESISTOR
	R307	QRD161J-273Y	CARBON RESISTOR
	R308	QRD161J-105Y	CARBON RESISTOR
	R309	QRD161J-563Y	C RESISTOR
	R310	QRD161J-823Y	CARBON RESISTOR
	R311	QRD161J-333Y	CARBON RESISTOR
	R312	QRD161J-273Y	CARBON RESISTOR
	R320	QRD161J-153Y	CARBON RESISTOR
	R321	QRD161J-473Y	CARBON RESISTOR
	R322	QRD161J-682Y	CARBON RESISTOR
	R323	QRD161J-472Y	CARBON RESISTOR
	R324	QRD161J-102Y	CARBON RESISTOR
	R325	QRD161J-105Y	CARBON RESISTOR
	R326	QRD161J-393Y	CARBON RESISTOR
	R327	QRD161J-223Y	CARBON RESISTOR
	R328	QRD161J-104Y	CARBON RESISTOR
	R329	QRD161J-105Y	CARBON RESISTOR
	R330	QRD161J-122Y	CARBON RESISTOR
	R331	QRD161J-223Y	CARBON RESISTOR
	R332	QRD161J-271Y	CARBON RESISTOR
	R335	QRD161J-101Y	CARBON RESISTOR
	R338	QRD161J-105Y	CARBON RESISTOR
	R401	QRD161J-563Y	C RESISTOR
	R402	QRD161J-124Y	CARBON RESISTOR
	R403	QRD161J-333Y	CARBON RESISTOR
	R404	QRD161J-393Y	CARBON RESISTOR
	R407	QRD161J-273Y	CARBON RESISTOR
	R408	QRD161J-105Y	CARBON RESISTOR
	R409	QRD161J-563Y	C RESISTOR
	R410	QRD161J-823Y	CARBON RESISTOR
	R411	QRD161J-333Y	CARBON RESISTOR
	R412	QRD161J-273Y	CARBON RESISTOR
	R420	QRD161J-153Y	CARBON RESISTOR
	R421	QRD161J-473Y	CARBON RESISTOR
	R422	QRD161J-682Y	CARBON RESISTOR
	R423	QRD161J-472Y	CARBON RESISTOR
	R424	QRD161J-102Y	CARBON RESISTOR
	R425	QRD161J-105Y	CARBON RESISTOR
	R426	QRD161J-393Y	CARBON RESISTOR
	R427	QRD161J-223Y	CARBON RESISTOR
	R428	QRD161J-104Y	CARBON RESISTOR
	R429	QRD161J-105Y	CARBON RESISTOR
	R430	QRD161J-122Y	CARBON RESISTOR
	R431	QRD161J-223Y	CARBON RESISTOR
	R432	QRD161J-271Y	CARBON RESISTOR
	R435	QRD161J-101Y	CARBON RESISTOR
	R438	QRD161J-105Y	CARBON RESISTOR
	R501	QRD161J-102Y	CARBON RESISTOR
	R504	QRD161J-102Y	CARBON RESISTOR
	R505	QRD161J-104Y	CARBON RESISTOR
	R506	QRD161J-222Y	CARBON RESISTOR
	R507	QRD161J-562Y	CARBON RESISTOR
	R508	QRD161J-102Y	CARBON RESISTOR
	R509	QRD161J-103Y	CARBON RESISTOR
	R510	QRD161J-332Y	CARBON RESISTOR

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF. NO	PARTS NO.	PARTS NAME
	R511	QRD161J-102Y	CARBON RESISTOR
	R512	QRD161J-683Y	CARBON RESISTOR
	R513	QRD161J-101Y	CARBON RESISTOR
	R514	QRD161J-822Y	CARBON RESISTOR
	R551	QRD161J-153Y	CARBON RESISTOR
	R553	QRD161J-682Y	CARBON RESISTOR
	R581	QRD161J-101Y	CARBON RESISTOR
	R582	QRD161J-102Y	CARBON RESISTOR
	R583	QRD161J-104Y	CARBON RESISTOR
	R584	QRD161J-224Y	CARBON RESISTOR
	R601	QRD161J-102Y	CARBON RESISTOR
	R604	QRD161J-102Y	CARBON RESISTOR
	R605	QRD161J-104Y	CARBON RESISTOR
	R606	QRD161J-222Y	CARBON RESISTOR
	R607	QRD161J-562Y	CARBON RESISTOR
	R608	QRD161J-102Y	CARBON RESISTOR
	R609	QRD161J-103Y	CARBON RESISTOR
	R610	QRD161J-332Y	CARBON RESISTOR
	R611	QRD161J-102Y	CARBON RESISTOR
	R612	QRD161J-683Y	CARBON RESISTOR
	R613	QRD161J-101Y	CARBON RESISTOR
	R614	QRD161J-822Y	CARBON RESISTOR
	R651	QRD161J-153Y	CARBON RESISTOR
	R653	QRD161J-682Y	CARBON RESISTOR
	R681	QRD161J-101Y	CARBON RESISTOR
	R682	QRD161J-102Y	CARBON RESISTOR
	R683	QRD161J-104Y	CARBON RESISTOR
	R684	QRD161J-224Y	CARBON RESISTOR
	R706	QRD161J-223Y	CARBON RESISTOR
	R707	QRD161J-104Y	CARBON RESISTOR
	R708	QRD161J-472Y	CARBON RESISTOR
	R709	QRD161J-103Y	CARBON RESISTOR
	R710	QRD161J-103Y	CARBON RESISTOR
	R711	QRD161J-184Y	CARBON RESISTOR
	R712	QRD161J-224Y	CARBON RESISTOR
	R713	QRD161J-273Y	CARBON RESISTOR
	R714	QRD161J-153Y	CARBON RESISTOR
	R715	QRD161J-563Y	C RESISTOR
	R716	QRD161J-103Y	CARBON RESISTOR
	R717	QRD161J-184Y	CARBON RESISTOR
	R718	QRD161J-224Y	CARBON RESISTOR
	R719	QRD161J-273Y	CARBON RESISTOR
	R720	QRD161J-153Y	CARBON RESISTOR
	R721	QRD161J-563Y	C RESISTOR
	R722	QRD161J-333Y	CARBON RESISTOR
	R723	QRD161J-103Y	CARBON RESISTOR
	R724	QRD161J-103Y	CARBON RESISTOR
	R727	QRD161J-103Y	CARBON RESISTOR
	R728	QRD161J-473Y	CARBON RESISTOR
	R729	QRD161J-103Y	CARBON RESISTOR
	R730	QRD161J-223Y	CARBON RESISTOR
	R731	QRD161J-103Y	CARBON RESISTOR
	R732	QRD161J-223Y	CARBON RESISTOR
	R800	QRD161J-203Y	CARBON RESISTOR
	R802	QRD161J-153Y	CARBON RESISTOR
	R803	QRD161J-102Y	CARBON RESISTOR
	R804	QRD161J-102Y	CARBON RESISTOR
	R805	QRD161J-104Y	CARBON RESISTOR
	R852	QRD161J-223Y	CARBON RESISTOR
	R853	QRD161J-103Y	CARBON RESISTOR
	R854	QRD161J-102Y	CARBON RESISTOR
	R855	QRD161J-102Y	CARBON RESISTOR
	R856	QRD161J-102Y	CARBON RESISTOR
	R857	QRD161J-102Y	CARBON RESISTOR
	R859	QRD161J-122Y	CARBON RESISTOR
	R860	QRD161J-122Y	CARBON RESISTOR
	R881	QRD161J-683Y	CARBON RESISTOR
	R882	QRD161J-683Y	CARBON RESISTOR
	R901	QRD161J-821Y	CARBON RESISTOR
	R902	QRD161J-332Y	CARBON RESISTOR
	R903	QRD161J-682Y	CARBON RESISTOR
	R904	QRD161J-103Y	CARBON RESISTOR
	R905	QRD161J-123Y	CARBON RESISTOR
	R906	QRD161J-471Y	CARBON RESISTOR
	R907	QRD161J-473Y	CARBON RESISTOR
	R908	QRD161J-471Y	CARBON RESISTOR
	R909	QRD161J-222Y	CARBON RESISTOR
	R910	QRD161J-332Y	CARBON RESISTOR
	R911	QRD161J-222Y	CARBON RESISTOR
	R912	QRD161J-392Y	CARBON RESISTOR
	R913	QRD161J-684Y	CARBON RESISTOR
	R914	QRD161J-101Y	CARBON RESISTOR
	R915	QRD161J-223Y	CARBON RESISTOR
	R916	QRD161J-472Y	CARBON RESISTOR
	R917	QRD161J-103Y	CARBON RESISTOR

⚠	REF. NO	PARTS NO.	PARTS NAME
	R918	QRD161J-103Y	CARBON RESISTOR
	R919	QRD161J-333Y	CARBON RESISTOR
	R920	QRD161J-682Y	CARBON RESISTOR
	R921	QRD161J-103Y	CARBON RESISTOR
	R922	QRD161J-472Y	CARBON RESISTOR
	R923	QRD161J-472Y	CARBON RESISTOR
	R924	QRD161J-332Y	CARBON RESISTOR
	R926	QRD161J-682Y	CARBON RESISTOR
	R927	QRD161J-332Y	CARBON RESISTOR
	R928	QRD161J-101Y	CARBON RESISTOR
	R929	QRD161J-223Y	CARBON RESISTOR
	R930	QRD161J-472Y	CARBON RESISTOR
	R931	QRD161J-103Y	CARBON RESISTOR
	R932	QRD161J-103Y	CARBON RESISTOR
	R933	QRD161J-103Y	CARBON RESISTOR
	R934	QRD161J-333Y	CARBON RESISTOR
	R935	QRD161J-223Y	CARBON RESISTOR
	R936	QRD161J-223Y	CARBON RESISTOR
	R937	QRD161J-103Y	CARBON RESISTOR
	R939	QRD161J-223Y	CARBON RESISTOR
	R940	QRD161J-223Y	CARBON RESISTOR
	R941	QRD161J-104Y	CARBON RESISTOR
	R942	QRD161J-333Y	CARBON RESISTOR
	R943	QRD161J-103Y	CARBON RESISTOR
	R945	QRD161J-332Y	CARBON RESISTOR
	R946	QRD161J-103Y	CARBON RESISTOR
	R947	QRD161J-472Y	CARBON RESISTOR
	R949	QRD161J-471Y	CARBON RESISTOR
	R951	QRD161J-102Y	CARBON RESISTOR
	R952	QRD161J-332Y	CARBON RESISTOR
	R953	QRD161J-472Y	CARBON RESISTOR
	R954	QRD161J-103Y	CARBON RESISTOR
	R955	QRD161J-103Y	CARBON RESISTOR
	R956	QRD161J-223Y	CARBON RESISTOR
	R957	QRD161J-223Y	CARBON RESISTOR
	R958	QRD161J-101Y	CARBON RESISTOR
	R959	QRD161J-103Y	CARBON RESISTOR
	R960	QRD161J-102Y	CARBON RESISTOR
	R963	QRD161J-103Y	CARBON RESISTOR
	R967	QRD161J-471Y	CARBON RESISTOR
	R968	QRD161J-333Y	CARBON RESISTOR
	R969	QRD161J-103Y	CARBON RESISTOR
	R970	QRD161J-392Y	CARBON RESISTOR
	R971	QRD161J-102Y	CARBON RESISTOR
⚠	R972	QRD149J-270S	C RESISTOR
⚠	R973	QRD149J-121S	CARBON RESISTOR
⚠	R974	QRD129J-151	C RESISTOR
⚠	R975	QRD149J-3R3S	C RESISTOR
	R976	QRD161J-123Y	CARBON RESISTOR
	R977	QRD161J-123Y	CARBON RESISTOR
	R978	QRD161J-392Y	CARBON RESISTOR
	R979	QRD161J-392Y	CARBON RESISTOR
⚠	R991	QRD129J-4R7	C RESISTOR
	S1	QSTM652-V01	PUSH SW
	TP1	E03719-5.0	FORMED BUS WIRE
	VR101	QVPA601-502	V.RESISTOR
	VR102	QVP4A0B-104	V.RESISTOR
	VR103	QVPA601-502	V.RESISTOR
	VR201	QVPA601-502	V.RESISTOR
	VR202	QVP4A0B-104	V.RESISTOR
	VR203	QVPA601-502	V.RESISTOR
	VR701	QVPE602-203	V RESISTOR
	VR702	QVPE602-103	V RESISTOR
	VR703	QVPE602-203	V RESISTOR
	VR704	QVPE602-103	V RESISTOR
	VR901	QVZ5017-V01	V RESISTOR

12 Exploded View of Mechanism Assembly

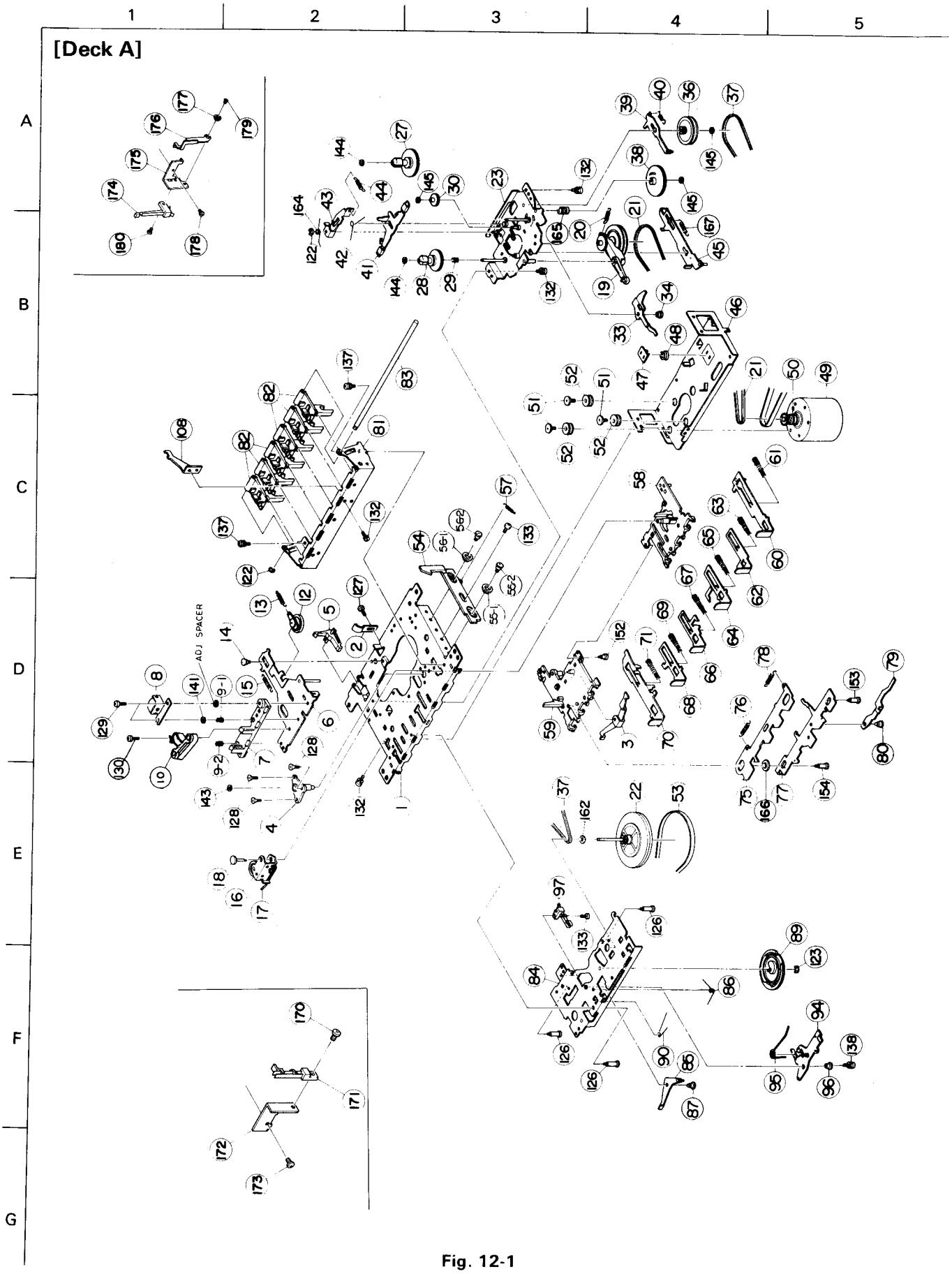


Fig. 12-1

Mechanism Component Parts List
[Deck A]

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	18200101T	CHASSIS BASE		1
	2	18200102T	PACK SPRING		1
	3	18200202T	REC.STOPPER		1
	4	18201207T	FLYWHEEL METAL		1
	5	18000201T	LEVER	REC SAFETY	1
	6	182003501ZT	HEAD PANEL ASSY		1
	7	18200311T	HEAD BASE		1
	8	VGH0421-014	R/P HEAD		1
	9-1	14400315T	HEAD SPRING	R/P HEAD	1
	9-2	14400312T	HEAD SPRING	ERASER HEAD	1
	10	VKS4710-001	DUMMY HEAD		1
	12	182003301ZT	T-UP ROLLER	PLATE ASS'Y	1
	13	18200312T	SPRING	T-UP ROLLER PLATE	1
	14	18200316T	P.COLLAR SCREW		1
	15	18200302T	SPRING	HEAD PANEL	1
	16	182004303ZT	P.ROLLER ASS'Y		1
	17	18200403T	P.ROLLER SPRING		1
	18	17152015T	STOPPER		1
	19	182007301ZT	RF.CLUTCH ASS'Y		1
	20	18200704T	SPRING	RF.CLUTCH ARM	1
	21	17150606T	RF. BELT		1
	22	182012307ZT	FLYWHEEL ASS'Y		1
	23	182005505ZT	BRACKET ASS'Y	REEL	1
	27	182006316ZT	T-UP REEL ASS'Y		1
	28	182006302ZT	REEL ASS'Y		1
	29	18200613T	SPRING	BACK TENSION	1
	30	18000610T	FF GEAR		1
	33	18200805T	AUTO STOP LEVER		1
	34	18200811T	COLLAR	AUTO STOP LEVER	1
	36	18200801T	PULLEY		1
	37	18200809T	BELT	AUTO STOP	1
	38	18200802T	CAM GEAR		1
	39	18200803AT	DETECT LEVER		1
	40	18200810T	DETECT LEVER SPRING		1
	41	182009301ZT	BRAKE ARM ASS'Y		1
	42	18200902T	BRAKE SPRING		1
	43	18200905T	A.S.G.LEVER		1
	44	18200914T	LEVER SPRING	A.S.GUARD	1
	45	18200903AT	R.F.SLIDE LEVER		1
	46	18201301T	FM BRACKET		1
	47	18201302T	FL.THRUST PLATE		1
	48	18201310T	DAMPER SPRING		1
	50	18201344T	MOTOR PULLEY		1
	51	18201305T	COLLAR SCREW	MOTOR	3
	52	18201306T	RUBBER CUSHION	MOTOR	3
	53	18201303T	CAPSTAN BELT		1
	54	18201401T	SLIDE LEVER	EJECT	1
	55	18201402T	COLLAR		1
	55-2	90790000T	ASS'Y SCREW		1
	56	18201403T	COLLAR		1
	56-2	90390000T	SCREW		1
	57	15590306T	SPRING	EJECT SLIDE LEVER	1
	58	18201001AT	BUTTON BASE (L)		1
	59	18201002AT	BUTTON BASE (R)		1
	60	182010501ZT	LEVER ASS'Y	PAUSE BUTTON	1
	61	18000903T	B.LEVER SPRING		1
	62	18201022T	LEVER	STOP BUTTON	1
	63	18201027T	B.LEVER SPRING		1
	64	18201021T	LEVER	FF BUTTON	1
	65	18000903T	B.LEVER SPRING		1
	66	18201020T	LEVER	REW BUTTON	1
	67	18201026T	B.LEVER SPRING		1
	68	18201019T	LEVER	PLAY BUTTON	1
	69	18201026T	B.LEVER SPRING		1
	70	18201018T	LEVER	REC.BUTTON	1

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	71	18201026T	B.LEVER SPRING		1
	75	18201042T	BUTTON CAM		1
	76	18201052T	SPRING	BUTTON CAM	1
	77	18201010T	SWITCH CAM		1
	78	18201031T	SPRING	SWITCH CAM	1
	79	18201011T	KICK LEVER	EJECT	1
	80	18200819T	COLLAR SCREW		1
	81	18201015T	BUTTON FRAME		1
	82	18201028T	FUNCTION LEVER		6
	83	18201016T	LEVER SHAFT		1
	84	182011527ZT	CHASSIS ASS'Y	SUB	1
	85	182011510ZT	ARM ASS'Y	M TRIGER.ARM	1
	86	18201126T	SPRING	M.TRIGGER ARM	1
	87	18201137T	COLLAR SCREW	M.TRIGGER ARM	1
	89	18201103T	MAIN GEAR		1
	90	18201131T	SPRING	MAIN GEAR	1
	94	182011505ZT	LIFT ARM ASS'Y		1
	95	18201129T	SPRING	LIFT ARM	1
	96	18201130T	COLLAR	LIFT ARM	1
	97	64010170T	LEAF SWITCH	MSW-1412TNBK	1
	108	18201035T	SHAFT STOPPER		1
	122	95000000T	E.RING	A.S.GUARD LEVER	1
		95000000T	E.RING	LEVER SHAFT	1
	123	95020000T	E.RING		1
	126	18201137T	COLLAR SCREW		3
	127	92000000T	TH.TAP.SCREW	PACK SPRING	1
	128	95620000T	MINI SCREW	FL METAL	3
	129	92120000T	PM.SCREW	ERASER HEAD	2
		92120000T	PM.SCREW	R/P HEAD	2
	132	90770000T	ASS'Y SCREW		1
		90770000T	ASS'Y SCREW		1
		90770000T	ASS'Y SCREW	RELL BRACKET	2
	133	90020000T	SCREW	FM BRACKET	1
		90020000T	SCREW		1
	137	90960000T	SCREW		2
	138	90980000T	ASS'Y SCREW		1
	141	93160000T	WASHER		1
	143	93720000T	NYLON WASHER	OIL CUT	1
	144	94970000T	E.RING	SUPPLY REEL	1
		94970000T	E.RING	T-UP REEL	1
	145	94210000T	POLY.WASHER	CAM GEAR	1
		94210000T	POLY.WASHER	PULLEY	1
		94210000T	POLY.WASHER	FF GEAR	1
	152	18201025T	COLLAR SCREW		1
	153	18201029BT	COLLAR SCREW		1
	154	18201030T	COLLAR SCREW		1
	162	97880000T	POLY. WASHER	THRUST	1
	164	18200914T	LEVER SPRING		1
	165	18200821T	CAM GEAR SPRING		1
		18200821T	CAM GEAR SPRING		1
	166	18201068T	SPACER		1
	167	18200913T	LEVER SPRING		1
	174	64050117T	LEAF SWITCH	LSB-1123	1
	175	18201177T	SWITCH BRACKET		1
	176	18201178T	SWITCH ARM		1
	177	18200806T	COLLAR		1
	178	90770000T	ASS'Y SCREW	FOR SWITCH BRACKET	1
	179	95660000T	MINI SCREW	FOR SWITCH ARM	1
	180	91160000T	SCREW		1

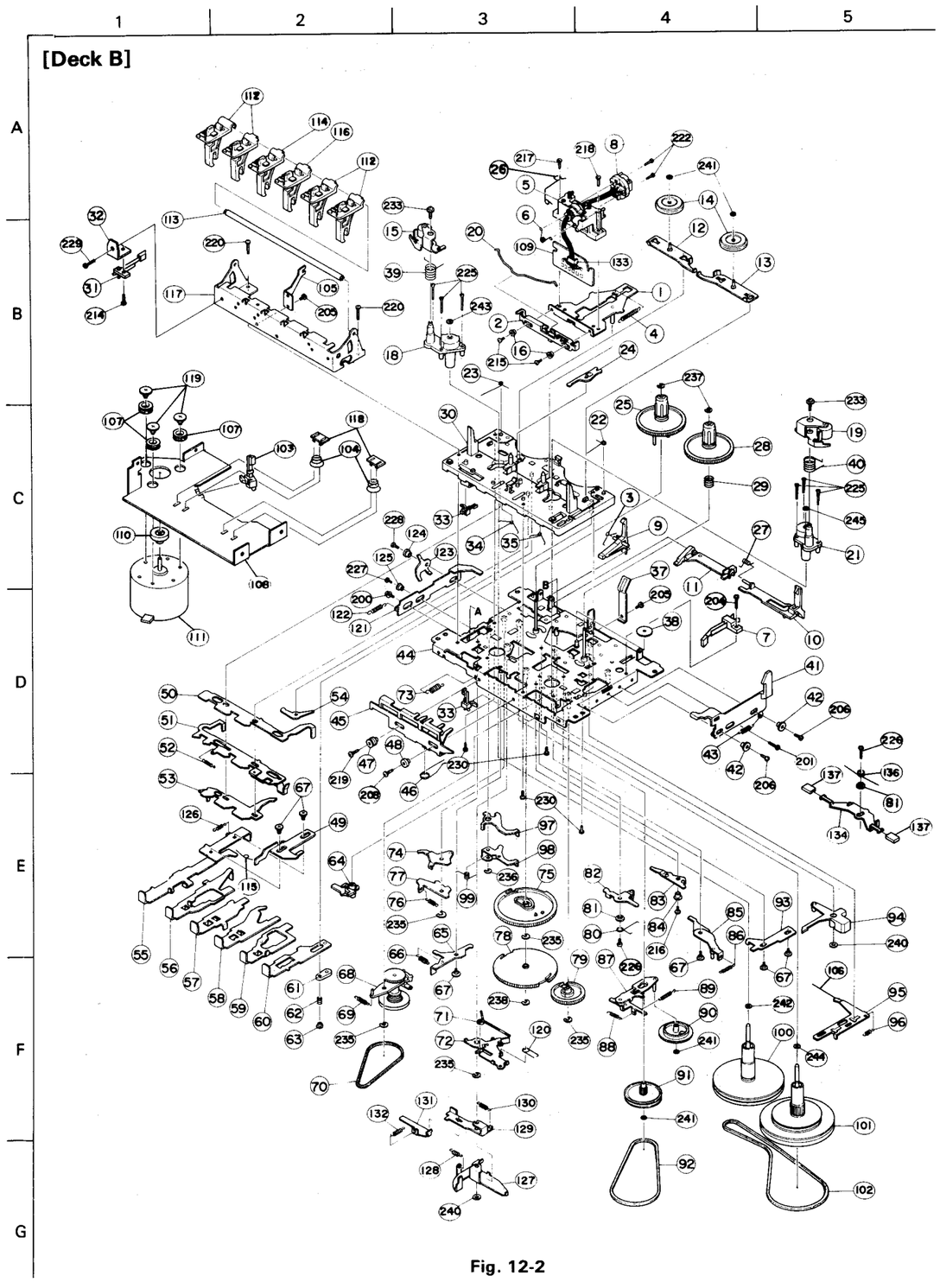


Fig. 12-2

Mechanism Component Parts List
[Deck B]

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	186502502ZT	H.PANEL ASS'Y		1
	2	18650218T	CHP LEVER		1
	3	18650136T	TORSION SP.		1
	4	18650211T	SPRING	FOR HEAD PANEL	1
	5	186502306ZT	HEAD BASE ASS'Y		1
	6	18650224T	TURNING SPRING		1
	7	64050131T	LEAF SWITCH	FOR BUTTON	1
	8	VGH0425-527	R/P & E HEAD		1
	9	18650129T	REC S.LEVER (F)		1
	10	18650130T	REC S.LEVER(R1)		1
	11	18650131T	REC S.LEVER(R2)		1
	12	186505502ZT	T.PLATE ASS'Y	FOR REV.	1
	13	186505501ZT	T.PLATE ASS'Y	FOR FWD.	1
	14	186505301T	T.ROLLER		1
		186505301T	T.ROLLER		1
	15	186504306ZT	P.ROLL.ARM ASY.	FOR REV.	1
	16	18650228T	COLLAR	FOR CHP.LEVER	2
	18	186509315ZT	FL METAL ASS'Y	FOR REV.	1
	19	186504307ZT	P.ROLL.ARM ASY.	FOR FWD.	1
	20	18650420T	P.ROLL.SPRING		1
	21	186509102T	FL METAL F ASY	FOR FWD.	1
	22	18650510T	T.ROLLER SPRING	FOR FWD	1
	23	18650511T	T.ROLLER SPRING	FOR REV.	1
	24	18652205T	CONTROL LEVER		1
	25	186505310ZT	REEL D.ASS'Y	FOR REV.	1
	26	18650258T	CLAMP SPRING		1
	27	18650137T	TORSION SPRING		1
	28	186505311ZT	R.DISK ASS'Y	FOR FWD.	1
	29	18650532T	SPRING		1
	30	18651401T	MAIN BASE		1
	31	64010181T	LEAF SWITCH		1
	32	18651475T	SWITCH BRACKET		1
	33	640101129T	LEAF SWITCH		1
		640101129T	LEAF SWITCH		1
	34	18650421T	SPRING	FOR P.ROLL.ARM	1
		18651432T	BUTTON L.SPRING	FOR FF-REW	1
	35	18651455T	BUTTON L.SPRING	FOR PAUSE-STOP	1
	37	18650140T	PACK SPRING		1
	38	18650120T	FF GEAR		1
	40	18650422T	SPRING	FOR FWD.ARM	1
	41	18651301T	SLIDE LEVER		1
	42	18651302T	COLLAR		2
	43	18651309T	SPRING		1
	44	186501508ZT	CHASSIS ASS'Y		1
	45	18652232T	CH SLIDE LEVER		1
	46	18652236T	CH GEAR SPRING		1
	47	18652240T	CH COLLAR A	M2 X 3	1
	48	18652241T	CH COLLAR B		1
	49	18652227T	REC S.LEVER		1
	50	18651429T	PC STOPPER		1
	51	186514504ZT	BUTTON CAM ASSY		1
	52	18651463T	SPRING	FOR BUTTON CAM	1
	53	18651407T	SWITCH CAM		1
	54	18651428T	RWD LEVER		1
	55	18651453T	REC BUTTON LEV.		1
	56	18651466T	PLAY BUT.LEVER		1
	57	18651418T	BUTTON LEVER		1
	58	18651419T	BUTTON LEVER		1
	59	18651420T	BUTTON LEVER		1
	60	186514505ZT	PAU.BUT.LEV.ASY		1
	61	18210115T	PAUSE LEVER		1
	62	18210116T	LEVER SPRING	FOR PAUSE	1
	63	18210134T	PAUSE STOPPER		1
	64	18652237T	MODE LEVER		1
	65	18652230T	D.S.S.PLATE		1

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	66	09401003T	SPRING		1
	67	18651121T	COLLAR SCREW		1
		18651121T	COLLAR SCREW		1
		18651121T	COLLAR SCREW		2
		18651121T	COLLAR SCREW		2
	68	186507304ZT	RF CLUTCH ASS'Y		1
	69	18001143T	SPRING	FOR RF CLUCH	1
	70	18650712T	BELT	FOR FF/REW	1
	71	18652104T	LIFT SPRING		1
	72	186521502ZT	LIFT ARM ASS'Y		1
	73	18652119T	SPRING		1
	74	186521501ZT	M.T.ARM ASS'Y	TRIGGER	1
	75	18652114T	M GEAR		1
	76	18652118T	SPRING		1
	77	18652113T	M TRIG. ARM B		1
	78	18652238T	CH GEAR		1
	79	18651701T	P GEAR		1
	80	18651708T	SPRING	FOR PLAY TRIGER	1
	81	18651604T	COLLAR		1
		18651604T	COLLAR		1
	82	186517502ZT	P.T.ARM ASS'Y	PLAY TRIGGER	1
	83	18651709T	RF TRIGGER ARM		1
	84	18651710T	RF COLLAR		1
	85	186517501ZT	P.A.ARM ASS'Y	PAUSE ACTUATOR	1
	86	17001613T	SPRING	FOR ACTUATOR ARM	1
	87	186511501ZT	PLATE ASS'Y	CAM GEAR	1
	88	18651113T	SPRING	FOR SENSER PLATE	1
	89	18651112T	SPRING	FOR CAM G.PLATE	1
	90	18651102T	CAM GEAR		1
	91	18651123T	BELT		1
	92	18651124T	BELT	FOR AUTO STOP	1
	93	18651109T	RF LEVER		1
	94	18651103T	SENSING PLATE		1
	95	18651114T	CONTROL LEVER		1
	96	18651111T	SPRING		1
	97	18652231T	STOP LEVER		1
	98	18652229T	D.S.S.LEVER		1
	99	18652235T	SPRING		1
	100	186509337ZT	FLYWHEEL ASY. R	FOR REV.	1
	101	186509336ZT	FLYWHEEL ASY. F	FOR FWD. (WITH GEAR)	1
	102	18650975T	MAIN BELT		1
	103	640101114T	LEAF SWITCH	PLAY	1
	104	18201310T	DAMPER SPRING		2
	105	18651431T	SHAFT STOPPER		1
	106	18651115T	TORSION SPRING		1
	107	18201306T	RUBBER CUSHION	FOR MOTOR	3
	108	18650967T	FL BRACKET		1
⚠	109	18650230T	P.C.BOARD		1
	111	186509335ZT	MOTOR ASS'Y		1
	112	18651425T	OPERATION LEVER		4
	113	18651477T	BUT.LEVER SHAFT		1
	114	18651480T	OPERATION LEVER		1
	115	18651471T	BUTTON LEVER SP	FOR REC	1
	116	18651454T	OPERATION LEVER		1
	117	18651479T	BUTTON FRAME		1
	118	18201302T	FL.THRUST PLATE		2
	119	18211202T	COLLAR SCREW	FOR MOTOR	3
	120	18652115T	TORSION SPRING		1
	121	18652226T	REC C.LEVER		1
	122	18652248T	SPRING		1
	123	18652228T	M KICK LEVER		1
	124	18652239T	COLLAR		1
	125	18200806T	COLLAR		1
	126	18400245T	SPRING		1
	127	186522504ZT	CH LEVER ASS'Y		1
	128	18652246T	SPRING		1
	129	18652244T	CH LEVER(J)		1
	130	18521711T	SPRING		1
	131	18652245T	CH LEVER(K)		1
	132	18652247T	SPRING		1
	133	18650965T	CODE CLAMPER		1
	134	18651601T	BRAKE ARM		1
	136	18651602T	BRAKE SPRING		1
	137	18200917T	BRAKE RUBBER		2
	200	90760000T	SCREW	M2 X 3	2
	204	91920000T	TAPPING SCREW	M2 X 8	1
	205	91780000T	TH.TAP.SCREW		1
		91780000T	TH.TAP.SCREW	FOR PACK SPRING	1
	206	91810000T	TH.TAP SCREW	M2 X 5	2
	208	92190000T	CAP SCREW	M2 X 1.5	1
	214	90010000T	SCREW		1
	215	95470000T	MINI SCREW	M2 X2.5	2
	216	95610000T	MINI SCREW	M2 X 3.5	1
	217	91170000T	SCREW		1
	218	90780000T	ASS'Y SCREW		1
	219	98300000T	MINI SCREW		1
		98300000T	MINI SCREW		1
	220	99870000T	MINI SCREW		2
	222	99991802T	SPECIAL SCREW		2
	225	98980000T	MINI SCREW	M2 X 8.5	3
		98980000T	MINI SCREW		3
	226	98090000T	CAMERA SCREW	M2 X 3.5	1
		98090000T	CAMERA SCREW		1
	227	99991808T	TH TAP SCREW		1
	228	95630000T	MINI SCREW		1
	229	96990000T	TH.TAP SCREW		1
	230	96740000T	TAPPING SCREW	M2 X 6	4
	233	99992001T	CAP SCREW		1
		99992001T	CAP SCREW		
	235	95020000T	E.RING	OR REE2000	1
		95020000T	E.RING	OR REE2000	1
		95020000T	E.RING	OR REE2000	1
		95020000T	E.RING	OR REE2000	1
		95020000T	E.RING	OR REE2000	1
	236	95000000T	E.RING		1
	237	94860000T	E.RING	OR REE1500	1
		94860000T	E.RING	OR REE1500	1
	238	94970000T	E.RING	OR REE1500	1
	240	97440000T	P.WASHER		1
		97440000T	P.WASHER		1
	241	94210000T	P.WASHER		1
		94210000T	P.WASHER		1
		94210000T	P.WASHER		1
		94210000T	P.WASHER	1.2X3X0.25T	1
		94210000T	P.WASHER		1
	242	97860000T	P.WASHER		1
	243	99990602T	NYLON WASHER		1
	244	99300000T	POLY. WASHER	2.2X3.8X0.5T	1
	245	93720000T	NYLON WASHER	2.1X3.5X0.5T	1

13 Exploded View of Enclosure Assembly and Parts List

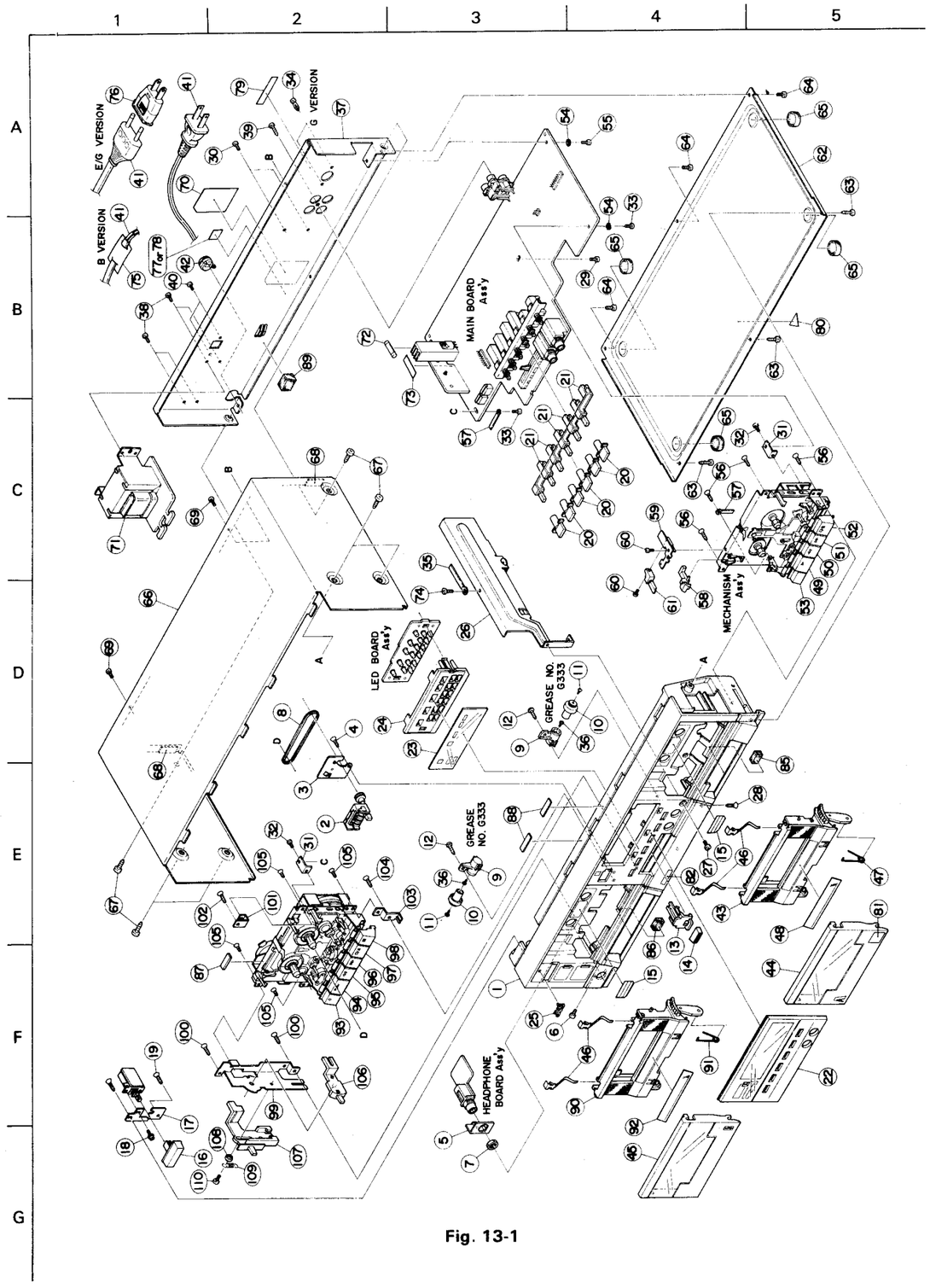


Fig. 13-1

Enclosure Assembly Parts List

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	VJC1572-003UL	FRONT PANEL	TD-W220J	1
		VJC1572-004	FRONT PANEL	TD-W220A/C/U	1
		VJC1572-006	FRONT PANEL	TD-W220B/E/G	1
	2	VKC5183-001T	TAPE COUNTER		1
	3	VKL6117-001	COUNTER BRACKET		1
	4	SDSF3010Z	SCREW	COUNTER BRACKET	1
	5	VKL6144-001	JACK BRACKET	TD-W220B/E/G	1
	6	SDST3006Z	SCREW	TD-W220B/E/G	1
	7	VKZ4150-001	SPECIAL NUT	TD-W220B/E/G	1
	8	VKB3000-107	BELT	T.COUNTER	1
	9	VYH5033-002	DAMPER HOLDER		2
	10	VYH4769-002	GEAR		2
	11	SBSB2004Z	SCREW	FOR GEAR	2
	12	SDSF3010Z	SCREW	FOR DAMPER HOLDER	2
	13	VKS4968-001	SLIDER		1
	14	VXS4225-002	SLIDE KNOB	FOR INPUT LEVEL	1
	15	VJD4005-003	REFLECTION PLAT		2
	16	E72789-001	POWER KNOB		1
	17	VKL6118-001	POWER BRACKET		1
	18	LPSP3006Z	SCREW	FOR P.SWITCH	1
	19	SSSF3010Z	SCREW	FOR S.BRACKET	2
	20	VXP4309-002	PUSH BUTTON	FOR SELECT	6
	21	VKS4970-001	REMOTE BAR		6
	22	VJK3377-001	FINDER		1
	23	VJD5036-002	LED PLATE		1
	24	VKS3309-001	LED HOLDER		1
	25	E72968-001	JVC MARK		1
	26	VKL3857-001	CENTER CHASSIS		1
	27	SSST3006Z	SCREW		1
	28	SSST3006Z	SCREW		1
	29	SDST3006Z	SCREW		1
	30	SDST3006Z	SCREW		2
	31	VKL6116-001	AMP BRACKET		1
		VKL6116-001	AMP BRACKET		1
	32	SDST2604Z	SCREW		2
	33	SDST3006Z	SCREW		2
	34	E48729-002	RIVET		2
	35	VKZ4001-011	WIRE HOLDER		1
	36	SPSH1730N	SCREW	FOR DAMPER HOLDER	2
	37	VJC2277-007	REAR PANEL	TD-W220A/B/C/E/J	1
		VJC2277-008	REAR PANEL	TD-W220G	1
		VJC2277-009	REAR PANEL	TD-W220U	1
	38	SDST3006Z	SCREW		4
	39	SDSF3008Z	SCREW		1
	40	SDSP3006Z	SCREW		2
⚠	41	QMP1200-200	POWER CORD	TD-W220C/J	1
⚠		QMP2560-200	POWER CORD	TD-W220A	1
⚠		QMP3900-200	POWER CORD	TD-W220E/G	1
⚠		QMP7380-200	POWER CORD	TD-W220U	1
⚠		QMP9017-008BS	POWER CORD	TD-W220B	1
⚠	42	QHS3876-162	S.R.BUSHING		1
⚠		QHS3876-162BS	S.R.BUSHING	TD-W220B ONLY	1
	43	VJT2143-001	CASETTE HOLDER	FOR DECK A	1
	44	VJT2144-004	CASSE LID	FOR DECK A	1
	45	VJT2144-003	CASSE LID	FOR DECK B	1
	46	VKY4180-001	CASSETTE SPRING		4
	47	VKW4584-001	HOLDER SPRING	FOR DECK A	1
	48	VJD4895-006	HOLDER PLATE	FOR DECK A	1
	49	VXP3190-002	MECHA BUTTON	FOR PLAY	1
	50	VXP3190-003	MECHA BUTTON	FOR REW	1
	51	VXP3190-004	MECHA BUTTON	FOR FF	1
	52	VXP3190-005	MECHA BUTTON	FOR STOP/EJECT	1
	53	VXP4627-001	MECHA BUTTON	FOR SYNCRO	2
	54	WBS3000N	WASHER		1
		WBS3000N	WASHER		2

⚠ Parts are safety assurance parts.
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⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	55	SDST3006Z	SCREW		1
	56	SSSF3010Z	SCREW		4
	57	VKZ4001-007	WIRE CLAMP		2
	58	VKS4833-001	ACTUATOR		1
	59	VKL5945-001	SWITCH BRACKET		1
	60	SDST2605Z	SCREW		2
	61	VSH1141-001	LEAF SWITCH		1
	62	VJC2259-003	BOTTOM COVER		1
	63	SDSF3008Z	SCREW		3
	64	SDST3006Z	SCREW		3
	65	VJF4003-005	FOOT		4
	66	VJC2287-002	TOP COVER		1
	67	SDSB4008M	SCREW		2
		SDSB4008M	SCREW		4
	68	VYSA1R3-029	SPACER		2
	69	SDST3006Z	SCREW		2
⚠	70	VYN2192-002PA	NAME PLATE	TD-W220B	1
⚠		VYN2192-003PA	NAME PLATE	TD-W220A	1
⚠		VYN2192-004PV	NAME PLATE	TD-W220C	1
⚠		VYN2192-005PA	NAME PLATE	TD-W220E	1
⚠		VYN2192-006PA	NAME PLATE	TD-W220J	1
⚠		VYN2192-007PA	NAME PLATE	TD-W220U	1
⚠		VYN2192-008PA	NAME PLATE	TD-W220G	1
⚠	71	VTP52A2-021F	P.TRANSFORMER	TD-W220C/J	1
⚠		VTP52G2-021F	P.TRANSFORMER	TD-W220U	1
⚠		VTP52M2-021F	P.TRANSFORMER	TD-W220A/B/G	1
		VTP52M2-021FBS	P.TRANSFORMER	TD-W220B	1
⚠	72	QMF51A2-R125	FUSE	F2 TD-W220U	1
⚠		QMF51A2-R80	FUSE	F1 TD-W220A/E/G/U	1
⚠		QMF51E2-R80BS	FUSE	F1 TD-W220B	1
	73	VND4003-046	FUSE LABEL	TD-W220U	1
	74	SDST3006Z	SCREW		1
	75	QZL1002-003	WARNING LABEL	TD-W220B	1
	76	V04062-001	SIEMENS PLUG	TD-W220U	1
	78	VND4037-002	F MARK	TD-W220G	1
	79	VND4205-002	CAUTION LABEL	TD-W220B	1
	80	VND4113-001	G.CAUTION CARD	TD-W220B/J	1
	81	VNC5004-001	MARK STICKER	TD-W220B/E/G	1
	82	TJL000420-01	CAUTION LABEL	TD-W220B	1
	85	VYSR107-005	SPACER		1
	86	VYSR105-011	SPACER		1
	87	VYSR105-005	SPACER		1
	88	VYSA1R3-029	SPACER		2
	89	VYSR115-009	SPACER		1
	90	VJT2145-001	CASSE HOLDER	FOR DECK B	1
	91	VKW4647-001	HOLDER SPRING	FOR DECK B	1
	92	VJD4895-007	HOLDER PLATE	FOR DECK B	1
	93	VXP3191-001	MECHA BUTTON	FOR REC	1
	94	VXP3191-002	MECHA BUTTON	FOR PLAY	1
	95	VXP3191-003	MECHA BUTTON	FOR REW	1
	96	VXP3191-004	MECHA BUTTON	FOR FF	1
	97	VXP3191-005	MECHA BUTTON	FOR STOP/EJECT	1
	98	VXP3191-006	MECHA BUTTON	FOR PAUSE	1
	99	VKL6122-001	MECHA BRACKET		1
	100	SSSF3010Z	SCREW		2
	101	VKL6120-001	MECHA BKT(U)		1
	102	SSSF3010Z	SCREW		1
	103	VKL6121-001	MECHA BKT(L)		1
	104	SSSF3010Z	SCREW		1
	105	SSST3006Z	SCREW		4
	106	VXQ4093-001	MODE LEVER		1
	107	VXQ4094-001	DIRECTION LEVER		1
	108	VYH5833-002	COLLAR		1
	109	VKW4561-001	SPRING		1
	110	SDST2606Z	SCREW		1

14 Packing and Parts List

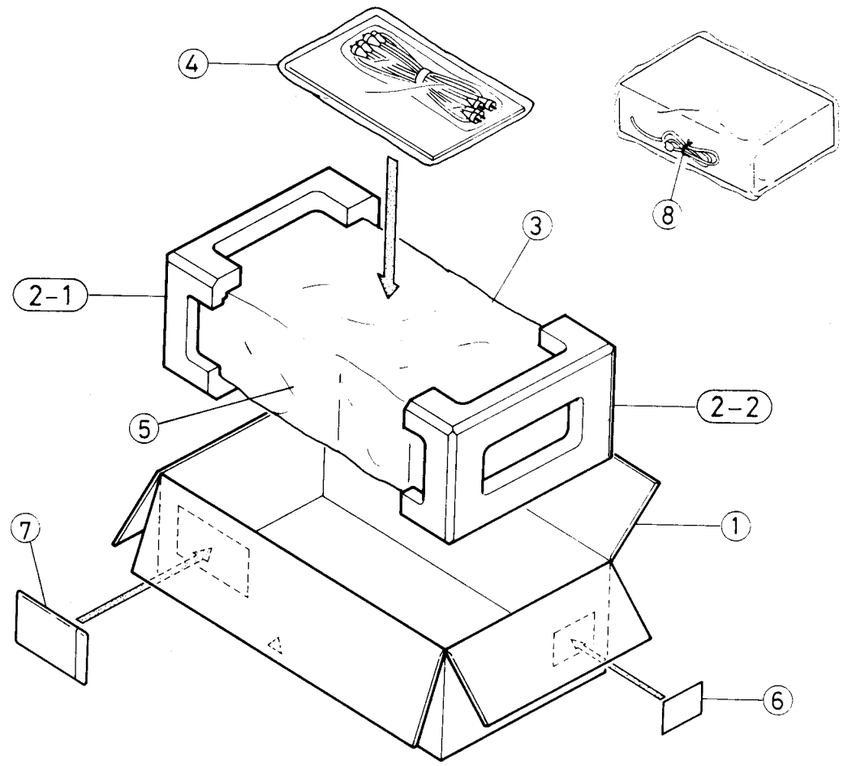

Fig. 14-1

Packing Parts List

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	1	VPC2192-002	Carton	TD-W220B	1
	1	" -003	"	TD-W220A	1
	1	" -004	"	TD-W220C	1
	1	" -005	"	TD-W220E	1
	1	" -006	"	TD-W220J	1
	1	" -007	"	TD-W220U	1
	1	" -008	"	TD-W220G	1
	2-1	VPH2297-001	Cushion	Left Side	1
	2-2	VPH2298-001	"	Right Side	1
	3	VPE3005-026	Poly Bag	for Set	1
	4	VPE3005-007	Poly Bag	for Instruction Book	1
	5	TKS000501-08	Sheet		1
	6	VPZ4001-001	Serial Ticket	TD-W220C/J	2
	6	"	"	TD-W220A/B/E/G/U	1
	7	E66416-003	Envelope	TD-W220J/U (for PX, EES)	1
	8	Q0414H	Wire Clamp	for Power Cord	1

15 Accessories

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Ref.No.	Parts No.	Parts Name	Remarks	Q'ty
		VNN2192-651	Instruction Book		1
		BT20060	Warranty Card	TD-W220B	1
		BT20066	"	TD-W220B/G	1
		BT20029C	"	TD-W220A	1
		BT20025J	"	TD-W220C	1
		BT20047C	"	TD-W220J/U (for PX, EES)	1
		BT20064	"	TD-W220G	1
		BT20071A	SVC Center List	TD-W220C	1
		BT20046C	Special Reply Card	TD-W220J/U (for PX, EES)	1
		BT20044E	Safety Guide	TD-W220J	1
		VNC2200-019	Copyright Law Warning	TD-W220A/B/C/E/U	1
		VNC5311-203	Caution Card	TD-W220U (for EES)	1
		VNC5311-204	"	TD-W220U (for PX)	1
		V04062-001	Siemens Plug	TD-W220U	1
		VMP0039-00B	Pin Cord		1
		BT20098	Warranty Card	TD-W220A (for New Zealand)	1